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(71) Applicant: **THE BOEING COMPANY** [US/US]; 100 North Riverside Plaza, Chicago, Illinois 60606-2016 (US).

(72) Inventors: **DIETRICH, David Michael**; 100 North Riverside Plaza, Chicago, Illinois 60606-2016 (US). **COCHRAN, Russell W.**; 100 North Riverside Plaza, Chicago, Illinois 60606-2016 (US). **BLOCH, Daniel D.**; 100

North Riverside Plaza, Chicago, Illinois 60606-2016 (US). **COLEMAN, Gary W.**; 100 North Riverside Plaza, Chicago, Illinois 60606-2016 (US).

(74) Agents: **BLUMENKRANTZ, Mark** et al.; The Boeing Company, MC H011-B171, 5301 Bolsa Avenue, Huntington Beach, California 92647 (US).

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[Continued on next page]

(54) Title: ADDITIVE-MANUFACTURING SYSTEMS, APPARATUSES AND METHODS

(57) Abstract: Additive-manufacturing systems, surface-processing apparatuses, and methods of forming products using an additive-manufacturing head are provided. In one aspect, an additive-manufacturing system includes an additive-manufacturing head and a surface-processing device coupled to the additive-manufacturing head. In another aspect, a surface-processing apparatus for an additive-manufacturing head includes a housing configured to be coupled to the additive-manufacturing head and a surface-processing device coupled to the housing. In a further aspect, a method of forming a product using an additive-manufacturing head includes forming one or more layers of the product with the additive-manufacturing head and processing at least one of the one or more layers of the product with a surface-processing device coupled to the additive-manufacturing head.

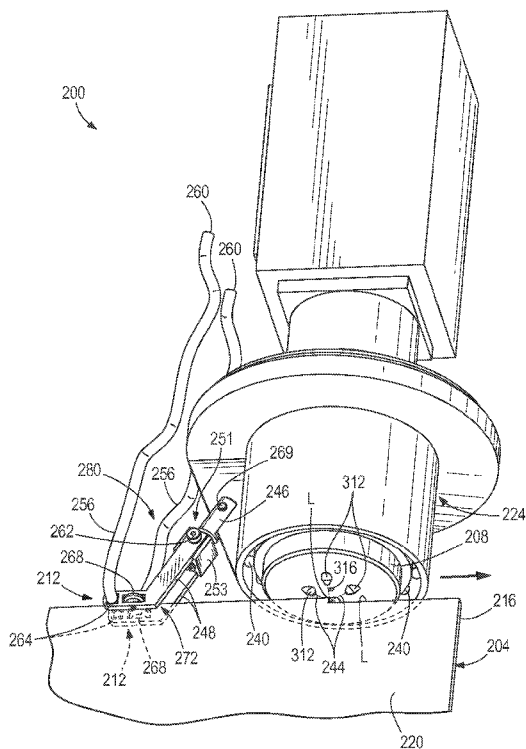


FIG. 3

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A. CLASSIFICATION OF SUBJECT MATTER  
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED  
Minimum documentation searched (classification system followed by classification symbols)  
B22F B29C F01D F16L H01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2011/127798 A1 (UNIV HUAZHONG SCIENCE TECH [CN]; ZHANG HAIYOU [CN]; WANG GUILAN [CN]) 20 October 2011 (2011-10-20) figure	1-5,8, 11-13
X,P	-& US 2013/197683 A1 (ZHANG HAIYOU [CN] ET AL) 1 August 2013 (2013-08-01) paragraph [0019] - paragraph [0023] figure; examples 3,5	1-5,8, 11-13
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Further documents are listed in the continuation of Box C.

See patent family annex.

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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Ceulemans, Judy
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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