

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2018/123240

**A. CLASSIFICATION OF SUBJECT MATTER**

B23B 31/12(2006.01)i

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)

B23B

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)

CNPAT, CNKI, WPI, EPODOC: 柳尧亭, 浙江三鸥, 钻头, 夹头, 自锁, 离合, 啮合, 脱离, 螺母, 开关, 旋转, 套; drill, chuck, sleeve, hold, teeth, claw, slid, rotat+

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	CN 209094588 U (LIU, Yaoting) 12 July 2019 (2019-07-12) claims 1-12, description, particular embodiments, and figures 1-21	1-16
Y	CN 108838415 A (LIU, Yaoting) 20 November 2018 (2018-11-20) description, embodiment 2, and figures 6-9	1-3, 9-16
Y	CN 201091926 Y (LI, Xiangyu) 30 July 2008 (2008-07-30) description, embodiment 3, and figures 9-15	1-3, 9-16
Y	CN 206286615 U (LIU, Yaoting) 30 June 2017 (2017-06-30) description, paragraphs [0159]-[0160], and figures 1-6	4
A	CN 207272259 U (ZHEJIANG SAN OU MACHINERY LIMITED COMPANY) 27 April 2018 (2018-04-27) entire document	1-16
A	US 2003/0137113 A1 (YUKIWA SEIKO K.K.) 24 July 2003 (2003-07-24) entire document	1-16
A	US 2007/0074948 A1 (SHANDONG WEIDA MACHINERY CO., LTD.) 05 April 2007 (2007-04-05) entire document	1-16

 Further documents are listed in the continuation of Box C.
  See patent family annex.

\* Special categories of cited documents:

“A” document defining the general state of the art which is not considered to be of particular relevance

“E” earlier application or patent but published on or after the international filing date

“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

“O” document referring to an oral disclosure, use, exhibition or other means

“P” document published prior to the international filing date but later than the priority date claimed

“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

“&” document member of the same patent family

Date of the actual completion of the international search

12 August 2019

Date of mailing of the international search report

28 August 2019

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**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

International application No.

**PCT/CN2018/123240**

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
CN 209094588 U	12 July 2019	None	
CN 108838415 A	20 November 2018	None	
CN 201091926 Y	30 July 2008	None	
CN 206286615 U	30 June 2017	None	
CN 207272259 U	27 April 2018	None	
US 2003/0137113 A1	24 July 2003	JP 2003211308 A	29 July 2003
		US 2003137113 A1	24 July 2003
		JP 4015857 B2	28 November 2007
		US 6843485 B2	18 January 2005
US 2007/0074948 A1	05 April 2007	DE 102006044459 A1	24 May 2007
		CN 100578036 C	06 January 2010
		US 7972093 B2	05 July 2011
		CN 1940328 A	04 April 2007