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- (30) 优先权:
201120087383.2 2011 年 3 月 29 日 (29.03.2011) CN
201110157464.X 2011 年 6 月 13 日 (13.06.2011) CN
- (72) 发明人: 及
- (71) 申请人: 高小林 (GAO, Xiaolin) [CN/CN]; 中国黑龙江省大庆市萨尔图区东风新村经六街 4-A 楼三楼, Heilongjiang 163000 (CN)。
- (74) 代理人: 大庆市远东专利商标事务所 (DAQING CITY YUANDONG PATENT TRADE MARK BUSINESS AGENCY); 中国黑龙江省大庆市高新区火炬新街 40 号孵化器 4 号楼 A 座 808 室, Heilongjiang 163316 (CN)。

- (81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW。
- (84) 指定国 (除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)。

根据细则 4.17 的声明:

— 发明人资格(细则 4.17(iv))

[见续页]

(54) Title: CENTRIFUGALLY POSITIONED EXTRUDER FOR CRUSHING STRAW

(54) 发明名称: 秸秆碾碎离心定位挤压压机

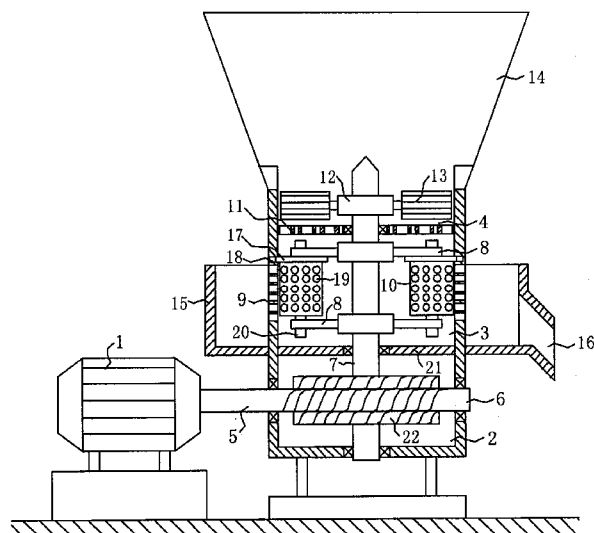


图 1 /Fig. 1

(57) Abstract: Disclosed in the invention is a centrifugally positioned extruder for crushing straw, which belongs to the art of agricultural machines, and comprises a driving-machine, a gearbox, a granulating chamber, and a kneading chamber. The output shaft of the driver is fixedly connected with the transverse input shaft of the gearbox. The vertical spindle of the gearbox extends through the granulating chamber and the kneading chamber. An I-shaped roller frame is fixed to the vertical spindle of the granulating chamber. More than one extruding roller is provided on the vertical shaft of the outer end of the I-shaped roller frame, and coordinates movably with a perforated plate of the cylinder wall of the granulating chamber, between which a clearance is formed. A transverse grate board is arranged between the kneading chamber and the granulating chamber. More than one group of roller shafts is transversely fixed to the vertical spindle of the kneading chamber. A kneading roller is arranged on each group of roller shafts, and coordinates movably with the grate board, between which a clearance is formed. The annular wall of the kneading chamber extends upward and is connected to a feeding hopper.

(57) 摘要:

[见续页]

**本国际公布:****(88) 国际检索报告公布日期:**

2012 年 11 月 22 日

- 包括国际检索报告(条约第 21 条(3))。
- 包括关于请求恢复一项或多项优先权要求的信息
(细则 26 之二.3 和 48.2(b)(vii))。

本发明的桔秆碾碎离心定位挤压机属于农业机械，是由驱动机、变速齿轮箱、造粒室和揉搓室构成。驱动机的输出轴与变速齿轮箱的横向输入轴相固定联接，变速齿轮箱的垂向主轴贯穿造粒室和揉搓室。在造粒室的垂向主轴上固定了工字型辊架，在工字型辊架外端的立轴上、且与造粒室的筒壁孔板成间隙地动配合了一个以上的挤压辊。揉搓室与造粒室之间有横向算板、揉搓室内的垂向主轴上横向固定了一组以上的辊轴，在各组辊轴上且与算板成间隙地动配合了揉搓辊；揉搓室的环壁向上延伸连接着进料斗。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/075995**A. CLASSIFICATION OF SUBJECT MATTER**

See the extra sheet

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)

IPC: B01J; B30B

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)

CPRSABS; WPI; EPODOC; CNKI: biomass, agricultural and forestry waste, crush, pinch roller, concave, convex, protrude, hole, straw, smash, knead, pelletize, granulate, roller

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0143415 A2 (HOWALDTSWERKE DEUT WERFT AG et al.), 05 June 1985 (05.06.1985), description, page 2, line 24 to page 4, line 34, and figure 1	1-3
Y	CN 101884894 A (LU, Bingwei), 17 November 2010 (17.11.2010), description, page 2, paragraphs 14-17, and figures 1-6	1-3
Y	CN 201701908 U (HU, Xinghai), 12 January 2011 (12.01.2011), figure 1	1-3
Y	CN 200945428 Y (LIU, Wanli), 12 September 2007 (12.09.2007), description, page 3, paragraph 2, and figure 2	2
Y	JP 11-276878 A (SHINKO INVEST KK), 12 October 1999 (12.10.1999), description, abstract, and figures 1-5	3

☒ 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

24 August 2012 (24.08.2012)

Date of mailing of the international search report

06 September 2012 (06.09.2012)

Name and mailing address of the ISA/CN:

State Intellectual Property Office of the P. R. China
No. 6, Xitucheng Road, Jimenqiao
Haidian District, Beijing 100088, China
Facsimile No.: (86-10) 62019451

Authorized officer

WANG, YanyanTelephone No.: (86-10) **62085473**

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/075995

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CN 201389444 Y (LIU, Diansen), 27 January 2010 (27.01.2010), description, page 3, paragraph 2 to page 4, paragraph 6, and figures 1-2	1-3
Y	CN 201572628 U (QINGDAO ZIHE INDUSTRY & TRADE CO., LTD.), 08 September 2010 (08.09.2010), description, paragraphs 12-21, and figures 1-3	1-3
Y	CN 201263978 Y (JIN, Zhengdao), 01 July 2009 (01.07.2009)	1-3

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/CN2012/075995

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
EP 0143415 A2	05.06.1985	DE 3342660 A1	05.06.1985
		DK 559184 A	26.05.1985
		DE 3477158 D1	20.04.1989
CN 101884894 A	17.11.2010	None	
CN 201701908 U	12.01.2011	None	
CN 200945428 Y	12.09.2007	None	
JP 11-276878 A	12.10.1999	None	
CN 201389444 Y	27.01.2010	None	
CN 201572628 U	08.09.2010	None	
CN 201263978 Y	01.07.2009	None	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2012/075995

A. CLASSIFICATION OF SUBJECT MATTER

B01J 2/20 (2006.01) i

B01J 2/22 (2006.01) i

B30B 11/22 (2006.01) i

国际检索报告

国际申请号
PCT/CN2012/075995

A. 主题的分类

参见附加页

按照国际专利分类(IPC)或者同时按照国家分类和 IPC 两种分类

B. 检索领域

检索的最低限度文献(标明分类系统和分类号)

IPC: B01J; B30B

包含在检索领域中的除最低限度文献以外的检索文献

在国际检索时查阅的电子数据库(数据库的名称, 和使用的检索词(如使用))

CPRSABS; WPI; EPODOC; CNKI 秸秆, 生物质, 农林废弃物, 揉搓, 破碎, 粉碎, 制粒, 造粒, 颗粒, 辊, 压轮, 滚轮, 凹, 凸, 突, 孔, straw, smash, knead, pelletize, granulate, roller

C. 相关文件

类 型*	引用文件, 必要时, 指明相关段落	相关的权利要求
Y	EP 0143415 A2 (HOWALDTSWERKE DEUT WERFT AG <i>et al.</i>) 05.6 月 1985 (05.06.1985) 说明书第 2 页第 24 行至第 4 页第 34 行、图 1	1-3
Y	CN 101884894 A (卢秉威) 17.11 月 2010 (17.11.2010) 说明书第 2 页第 14 段至第 17 段、图 1-6	1-3
Y	CN 201701908 U (胡兴海) 12.1 月 2011 (12.01.2011) 图 1	1-3
Y	CN 200945428 Y (刘万里) 12.9 月 2007 (12.09.2007) 说明书第 3 页第 2 段、图 2	2
Y	JP 11-276878 A (SHINKO INVEST KK) 12.10 月 1999 (12.10.1999) 说明书摘要、说明书附图 1-5	3

☒ 其余文件在 C 栏的续页中列出。

☒ 见同族专利附件。

* 引用文件的具体类型:

“A” 认为不特别相关的表示了现有技术一般状态的文件

“E” 在国际申请日的当天或之后公布的在先申请或专利

“L” 可能对优先权要求构成怀疑的文件, 或为确定另一篇引用文件的公布日而引用的或者因其他特殊理由而引用的文件(如具体说明的)

“O” 涉及口头公开、使用、展览或其他方式公开的文件

“P” 公布日先于国际申请日但迟于所要求的优先权日的文件

“T” 在申请日或优先权日之后公布, 与申请不相抵触, 但为了理解发明之理论或原理的在后文件

“X” 特别相关的文件, 单独考虑该文件, 认定要求保护的发明不是新颖的或不具有创造性

“Y” 特别相关的文件, 当该文件与另一篇或者多篇该类文件结合并且这种结合对于本领域技术人员为显而易见时, 要求保护的发明不具有创造性

“&” 同族专利的文件

国际检索实际完成的日期
24.8 月 2012 (24.08.2012)

国际检索报告邮寄日期
06.9 月 2012 (06.09.2012)

ISA/CN 的名称和邮寄地址:
中华人民共和国国家知识产权局
中国北京市海淀区蓟门桥西土城路 6 号 100088
传真号: (86-10)62019451

授权官员

王艳艳
电话号码: (86-10) **62085473**

C(续). 相关文件

类 型	引用文件, 必要时, 指明相关段落	相关的权利要求
Y	CN 201389444 Y(刘殿森)27.1 月 2010 (27.01.2010) 说明书第 3 页第 2 段至第 4 页第 6 段、图 1-2	1-3
Y	CN 201572628 U (青岛子鹤工贸有限公司) 08.9 月 2010 (08.09.2010) 说明书第 12 段至第 21 段、图 1-3	1-3
Y	CN 201263978 Y (金正道) 01.7 月 2009 (01.07.2009)	1-3

国际检索报告
关于同族专利的信息

国际申请号
PCT/CN2012/075995

检索报告中引用的 专利文件	公布日期	同族专利	公布日期
EP0143415A2	05.06.1985	DE3342660A1	05.06.1985
		DK559184A	26.05.1985
		DE3477158D1	20.04.1989
CN 101884894 A	17.11.2010	无	
CN 201701908 U	12.01.2011	无	
CN 200945428Y	12.09.2007	无	
JP 11-276878 A	12.10.1999	无	
CN 201389444 Y	27.01.2010	无	
CN 201572628 U	08.09.2010	无	
CN 201263978 Y	01.07.2009	无	

A. 主题的分类

B01J 2/20(2006.01) i

B01J 2/22(2006.01) i

B30B 11/22(2006.01) i