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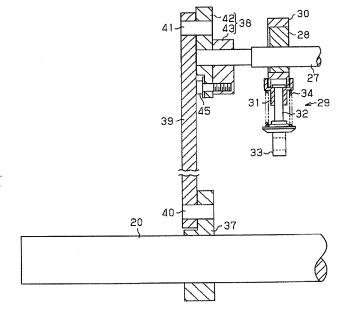
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(54)Combing machine

(57)The combing machine includes a nipper shaft, a nipper frame, a bottom nipper, a nipper arm, a top nipper, a rotary shaft, an eccentric member and a supporting member. The combing machine is characterized in that a first crank is fixed on the nipper shaft for rotation therewith and a second crank is fixed to the rotary shaft for rotation therewith. In addition, a link is connected between an end of the first crank and an end of the second

crank by pins. The first crank, the second crank and the link form a four-bar linkage. Further, the second crank has a first member and a second member. Further, the first member has a hole through which the pin is inserted. Further, the second member is fixed on the rotary shaft for rotation therewith. Further, a position at which the second member is fixed to the first member is adjustable.

FIG. 2



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EUROPEAN SEARCH REPORT

Application Number

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I	DOCUMENTS CONSID				
Category	Citation of document with in of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
Х	US 3 562 865 A (EIC AL) 16 February 197 * claim 1; figure 2	CHENBERGER HANSULRICH ET 71 (1971-02-16) 2 *	1-6	INV. D01G19/26 D01G19/04 D01G19/16	
A		IANGSU DONGFEI MAZUOLI ENGINEERING TECHNOLOGY 0 (2010-03-17)	1-6	B01013710	
				TECHNICAL FIELDS SEARCHED (IPC)	
				D01G	
	The present search report has				
	Place of search	Date of completion of the search		Examiner	
	Munich	16 December 2014	Dup	uis, Jean-Luc	
CATEGORY OF CITED DOCUMENTS 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		T : theory or principle E : earlier patent doo after the filing date	T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document oited in the application		
		L : document cited for & : member of the sar	L : document cited for other reasons & : member of the same patent family, corresponding document		

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

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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	Patent document cited in search report		Publication date	Patent family member(s)		Publication date				
	US 3562865	Α	16-02-1971	CH DE DE FR GB US	471910 A 1683291 A1 1685574 A1 1562179 A 1222436 A 3562865 A	30-04-1969 06-11-1969 12-08-1971 24-02-1969 10-02-1971 16-02-1971				
	CN 201424530	Υ	17-03-2010	NONE						
FORM P0459										
⊞ For mo	For more details about this annex : see Official Journal of the European Patent Office, No. 12/82									