



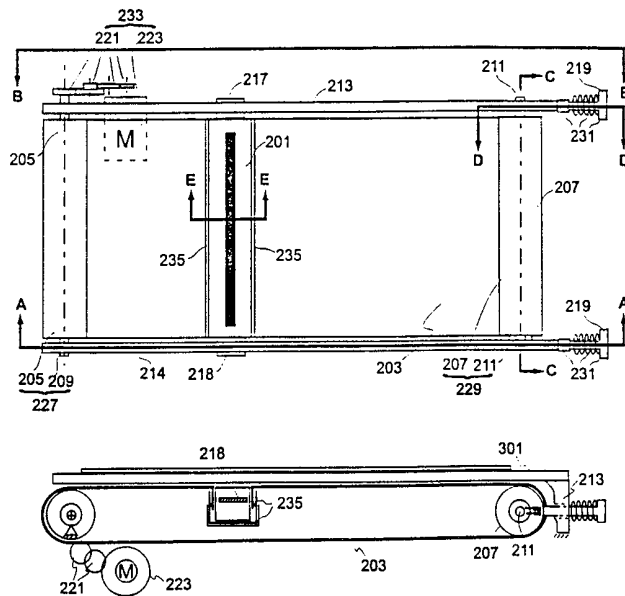
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : H04N 1/04</p>	<p>A3</p>	<p>(11) International Publication Number: WO 00/05872 (43) International Publication Date: 3 February 2000 (03.02.00)</p>
<p>(21) International Application Number: PCT/US99/16557 (22) International Filing Date: 21 July 1999 (21.07.99) (30) Priority Data: 60/093,831 22 July 1998 (22.07.98) US Not furnished 20 July 1999 (20.07.99) US (71) Applicant: JEROME E. ROBERTSON & ASSOC. [US/US]; Jerome E. Robertson, Trustee in Bankruptcy for Storm Technology, Inc., 129 Fremont Avenue, Los Altos, CA 94022 (US). (72) Inventors: CRAIG, Samuel, F.; 1371 Springfield Drive, Pittsburg, CA 94565 (US). LARKIN, Eric; 2187 Bello Avenue, San Jose, CA 95125 (US). (74) Agents: SLONE, David, N. et al.; Townsend and Townsend and Crew LLP, 8th floor, Two Embarcadero Center, San Francisco, CA 94111 (US).</p>		<p>(81) Designated States: CN, GB, JP, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 20 April 2000 (20.04.00)</p>

(54) Title: APPARATUS FOR FLAT-BED SCANNER IMAGING SYSTEM TRANSPORT

(57) Abstract

A contact image sensor (CIS) (201) is incorporated into a drive belt (203) attached to the length of the CIS, resulting in a more compact scanning mechanism and in lighter and smaller scanning devices. The CIS (201) is forced to traverse the document by a drive mechanism (235) that pulls the entire belt and CIS across the document while maintaining the tension necessary to keep the document in the narrow depth of focus. This mechanism provides a uniform force on the CIS, reducing the possibility of yawing motion, and keeps the document in focus through the tension on the drive belt. The combined CIS and transport mechanism power requirements can be supplied by standard computer interfaces. The mechanism also hides the internal workings of the scanner behind a drive belt (203) that is the size of the platen window (301). The drive belt can either be printed with instructions or markings to indicate document placement, or left blank.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/16557

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :H04N 1/04
US CL :358/497,494,474,471,483; 250/108.1, 234, 235; 399/211
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)
U.S. : 358/497,494,474,471,483; 250/108.1, 234, 235; 399/211

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WEST: CIS or (contact image sensor), driving, belt

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,050,812 A (KOIZUMI ET AL.) 27 September 1977, Fig. 3, col. 3, lines 5-57.	1-6 and 10 ----- 8, 9
Y	US 5,734,483 A (ITOH) 31 March 1998, Figs. 2-9.	8
Y	US 5,548,417 A (SEKIMOTO ET AL.) 20 August 1996, Figs. 6-9, col. 8, line 37 - col. 9, line 25.	9

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

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Date of the actual completion of the international search
11 JANUARY 2000

Date of mailing of the international search report
07 FEB 2000

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