

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte IWAO KAWAMURA, RYOUMA SUZUKI, KAZUHIRO MURAKAMI, NAOKI
KIYOHARA, KENSUKE IZUMA, KIYOKAZU NAMEKATA, TATSUO FUJIMURA,
MITSUHARU TAKIZAWA and KEIKO NAZUKA

Appeal No. 2003-1514
Application No. 09/180,038

ON BRIEF

Before STAAB, MCQUADE and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-15¹, which are all of the claims pending in this application.

BACKGROUND

¹ As explained on pages 2 and 3 of the answer (Paper No. 18), the examiner has renumbered the claim originally numbered by appellants as claim 16 to claim 15 pursuant to 37 CFR § 1.126. Thus, in accordance with the examiner's numbering, the claim referred to by appellants in their brief as claim 16 is referred to herein as claim 15.

The appellants' invention relates to a recording medium cutter and an image forming device for forming an image on the recording medium, such as recording paper, and to an image forming device using the recording medium cutter. As explained on page 1 of appellants' specification, in image forming devices such as ink jet printers, the area of a large sized paper sheet is sometimes divided into smaller segments to arrange smaller size images to make efficient use of the large size paper sheet. In such cases, normally after the image is formed, the paper sheet is cut into the segments. Appellants' invention is particularly directed to the cutting of the paper sheet into segments around the images after the images have been formed on the sheet. A copy of the claims under appeal is set forth in the appendix to the appellants' brief.²

The examiner relied upon the following prior art references in rejecting the appealed claims:

Hayamizu et al. (Hayamizu)	4,721,058	Jan. 26, 1988
Bay	4,784,318	Nov. 15, 1988
Komatsu	5,042,349	Aug. 27, 1991

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayamizu in view of Komatsu.

² The examiner indicates on page 3 of the answer that "[c]laim 16 contain(s) substantial errors as presented in the Appendix to the brief," but, aside from indicating that the examiner has renumbered claim 16 to be claim 15, the examiner has not pointed out what those errors are and we have not observed any.

Claims 11-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bay.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 18) for the examiner's complete reasoning in support of the rejections and to the brief and reply brief (Paper Nos. 16 and 19) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Turning first to the rejection of claims 1-10 as being unpatentable over Hayamizu in view of Komatsu, we note that independent claim 1 recites rotary and driven blades, a blade holder for rotatably holding the rotary and driven blades with a positional relationship between the two blades kept fixed such that the two blades are always in contact with each other³ and a rotator for pivotally rotating the blade holder between a

³ We note that page 44, line 13, of appellants' specification refers to a "gap between the two blades being kept fixed at a desired value." As it is clear from the remainder of the specification (see, for example, page 21, line 18, to page 22, line 3) that the rotary and driven blades, though not coaxial, are in face-to-face contact with one another at all times, we understand the term "gap" as used in appellant's specification as referring to the offset of the rotational axes of the blades.

cutting position and a non-cutting position. Hayamizu, the primary reference relied upon by the examiner, discloses a cutter comprising a single blade (slitter knife 90) which is mounted on a cutter arm 88 that rotates unitarily with a tubular pipe 83. The slitter knife 90 is displaced downward with clockwise pivotal movement of the tubular pipe 83 and cutter arm 88 into a groove 80 of a drag roller 81 to cut paper fed between the slitter knife 90 and the drag roller 81 in the manner explained in column 8 of Hayamizu. When the cutting of the paper is finished, the cutter arm 88 is pivotally rotated in a counterclockwise direction by action of a spring 94 to displace the slitter knife 90 upward away from the drag roller 81.

Hayamizu lacks a second blade and a blade holder for holding the two blades in a fixed relationship to one another such that the blades are always in contact with each other as called for in claim 1. The examiner's position that the drag roller 81 is a driven blade (answer, pages 7-8) is not well taken. Further, even if the drag roller 81 is considered to be a driven blade, there is no pivotally rotating blade holder which holds the two in fixed relationship to one another.

Komatsu discloses a cutter comprising two cup-shaped rotary blades 11, 12 which are held in fixed relationship and pressed into contact with one another by a plate spring member 16. The blades and plate spring member are in turn mounted via an arm 18a to a slider 18 which translates along guides 32, 33 as the blades rotate so as to move longitudinally along a fixed cutting work. Komatsu does not disclose any

pivotal rotation of the slider 18, arm 18a and plate spring member 16. According to the examiner, it would have been obvious to modify Hayamizu to include “the driven blade and the rotary blade are always in contact with each other” and such modification would have allowed the cutter to cut thin papers and to cut through a thick cutter work, as taught by Komatsu (answer, pages 8 and 9).

The examiner has not explained, and it is not apparent to us, how the combined teachings of Hayamizu and Komatsu would have suggested modification of Hayamizu to arrive at the invention recited in claim 1. Hayamizu and Komatsu disclose two distinct cutting devices. Hayamizu uses a single blade which is moved via pivotal rotation of a blade holder on which it is mounted toward and away from a drag roller with which it cooperates to cut the drawing paper. Komatsu, on the other hand, uses two contacting rotary blades which are mounted onto a slider which translates the blades together as a unit. First, it is not apparent to us why one of ordinary skill in the art would have been led by the teachings of Komatsu to replace the single blade cutter of Hayamizu with the translating double rotary blade arrangement of Komatsu. Moreover, even if such a substitution were made, the result would not appear to include a rotator for pivotally rotating a blade holder holding the two blades between a cutting position and a non-cutting position as called for in claim 1.

For the foregoing reasons, we conclude that the teachings of Hayamizu and Komatsu are insufficient to establish that the subject matter of claim 1 as a whole would

have been obvious to one of ordinary skill in the art at the time of appellants' invention. Accordingly, we shall not sustain the examiner's rejection of claim 1 or claims 2-10 which depend therefrom.

We turn next to the examiner's rejection of claims 11-15 as being anticipated by Bay. Each of independent claims 11, 13 and 15 recites, inter alia, paper sheet side edge detecting means for detecting the positions of the two side edges of the paper sheet which are parallel with a paper sheet moving direction. Claim 11 further recites image area detection means for obtaining information about an area of an image by checking positions of image points that are most away from the origin of the image respectively in the paper sheet moving direction and in the direction perpendicular to the paper sheet moving direction.

Bay discloses apparatus for cutting a paper or foil web into variously sized rectangles, such as the German Industrial Standard (DIN) formats A0, A2, A3 and A4. Such cutting requires both longitudinal and transverse cuts and involves some diversion of scrap segments 23. The cutting apparatus includes a transverse cutter 9 and a plurality of longitudinal cutting units 26, which are selectively actuated only if the form calls for a longitudinal cut. The paper web to be cut is provided with a plurality of codes 20 containing a series of stripes or fields 29, 30 (see Figure 6) which are colored either black or white to convey command information associated with the transverse cutter, longitudinal cutting units and deflectors (for deflecting cut scrap segments). For

example, a black field may indicate that the associated cutting unit or deflector is to be actuated, while a white field may indicate that the associated cutting unit or deflector is not to be actuated. These stripes or fields are sampled or picked up by a sensor 5 during transport of the web through the apparatus and corresponding signals are transmitted to the control unit CU to either actuate or not actuate the cutting units and deflectors. Thus, in essence, the codes 20 provide all the commands necessary to actuate the cutting units and deflectors to cut the desired pattern of rectangular segments.

In response to appellants' argument that Bay fails to disclose paper sheet side edge detecting means as recited in claims 13 and 15 (brief, pages 11-12), the examiner contends that signals from the sensed bar code 20 indicate the position of the edges to be cut from the web and that, thus, the positional relationship between the two side edges of the paper to be cut are detected (answer, pages 13-14). The examiner's position that Bay's sensing of the codes 20 responds to the paper sheet side edge detecting means recited in claims 11, 13 and 15 is unsound. While the signals transmitted from reading the codes 20 are used to control the cutting units and deflectors to make cuts and to deflect scrap, thereby forming the edges of the segments to be cut in the web, the reading of codes 20 in no way detects the position of the side edges of the paper sheet or web which is to be cut.

Moreover, Bay lacks image area detection means as called for in claim 11. We do not share the examiner's view as expressed on pages 12 and 13 of the answer that Bay's sensor 5 checks positions of image points that are most away from the origin of the image by reading the various fields of the codes 20, thereby providing response for the image area detection means recited in claim 11. While Bay's sensor 5 reads the information in each of the fields, Bay cannot reasonably be considered to check positions of points on the codes, much less positions of image points which are necessarily most away from the origin of the image in either direction. We understand the language "checking positions of image points that are most away from the origin of the image ..." as requiring structure for locating the outermost points of the image furthest from an origin and for determining their position. Bay's sensor 5, on the other hand, appears to merely consecutively read a predetermined number of fields and transmit the information therefrom to a controller.

For the foregoing reasons, we agree with appellants that Bay does not disclose all the limitations of claims 11, 13 and 15 or claims 12 and 14 depending from claims 11 and 13. Thus, we shall not sustain the rejection of these claims as being anticipated⁴ by Bay.

⁴ To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001); Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-15 is reversed.

REVERSED

LAWRENCE J. STAAB)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN P. MCQUADE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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