Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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*Ex parte* YOSHIHIRO SETO and TOSHIMI FURUYA

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Appeal No. 1998-2213
Application 08/655,863

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ON BRIEF

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Before WARREN, OWENS and PAWLIKOWSKI, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This is an appeal from the examiner's final rejection of claims 6-17. Subsequent to the final rejection, claims 10 and 13 were indicated allowable by the examiner (advisory action mailed June 30, 1997 (paper no. 9); examiner's answer, page 9). Claims 1-5, which are the only other claims in the application, have been canceled.

*THE INVENTION*

The appellants' claimed invention is directed toward a biochemical analysis apparatus having a plurality of suction devices for transferring and holding an analysis film, and an independent pressure monitoring device in at least two of the suction devices for independently monitoring the pressure of the suction device. Claim 6 is illustrative:

6. A biochemical analysis apparatus for analyzing biochemical properties of a specimen, comprising:

film cartridge means for containing a plurality of analysis films and dispensing said films in a sequential manner;

sample station means for providing a sample to be analyzed;

processing station means for processing said sample;

analyzing station means for analyzing said biochemical properties of said sample;

a plurality of suction means for transferring and holding said analysis film to at least two of said cartridge means, said sampling station means, said processing station means, and said analysis station means; and

independent pressure monitoring means in at least two of said suction means for independently monitoring the pressure in said suction means.

*THE REFERENCES*

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| Scholten et al. (Scholten) | 4,683,654 | Aug. 4, 1987 |
| Kurimura et al. (Kurimura) | 4,807,984 | Feb. 28, 1989 |
| Sugaya (European patent application) | 0 555 654 | Aug. 18, 1993 |

*THE REJECTIONS*

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 6-9, 12 and 14-17 over Sugaya in view of Kurimura, and claim 11 over Sugaya in view of Kurimura and Scholten.

*OPINION*

We affirm the aforementioned rejections.

The appellants state that each of claims 6-8, 12 and 16 stands or falls separately and that claims 14 and 15 stand or fall together, as do claims 9 and 17 (brief, page 3). Hence, we address claims 6-8, 12 and 16, one claim from each of the two groups, i.e., claims 9 and 14, and separately-rejected claim 11. *See In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

*Claim 6*

The appellants do not challenge the examiner's finding (answer, page 4) that Sugaya discloses a biochemical analysis apparatus having each of the elements recited in claim 6 except for the pressure monitoring means. Moreover, the appellants acknowledge that such an apparatus was known to those of ordinary skill in the art at the time of the appellants' invention (specification, page 4, lines 10-24).

Kurimura discloses a specimen inspection apparatus in which a specimen slide (28) is held by vacuum through openings 37A-D in holding arms 16A-B (col. 2, line 63 - col. 3, line 28; figure 4). Air leaks caused by a defective specimen holding arm, a defective slide specimen, or dust on the slide specimen surface are detected by a vacuum pressure detector (30) and controlled by a control circuit (34) and a computer (35) (col. 6, lines 34-60). "[T]he vacuum pressure detector **30** having the vacuum pressure specified to a moderate range will be efficient enough to detect the size of a flaw on the arm, the size of dust on the slide specimen or defective insertion thereof" (col. 6, line 66 - col. 7, line 2).

The examiner argues (answer, page 7):

> Sugaya teaches a plurality of independent suction means (figures 5 and 6, numerals 24a and 25b). Kurimura et al. teach a single pressure detector 30 for monitoring pressure of a single holding means. Therefore, one of ordinary skill in the art would have found it obvious to include a pressure detector in each of the plurality of independent suction means of Sugaya['s] system in order to detect whether or not the film is properly positioned on a suction means prior to transportation thereof as well as the source of defects in each suction means so that an appropriate step would be taken upon the judgment.

The appellants argue that Kurimura discloses a single vacuum pressure detector (30) for multiple suction means (37A-D), i.e., a shared pressure monitor, whereas the appellants use independent pressure monitors (brief, page 5; reply brief, pages 1-2). Kurimura's pressure detector has a number of vacuum openings (37A-D), but these vacuum openings are all used to hold the same specimen slide. Likewise, the appellants can use a number of vacuum openings to hold the same analysis film, as indicated by the appellants' figures 5 and 6A-C and the related discussion in the specification (page 13, line 18 - page 14, line 23). Thus, Kurimura, like the appellants, uses one pressure detector for one suction means.

The appellants argue that neither the device of Sugaya nor that of Kurimura has the capability of locating a suction malfunction in a system having a plurality of suction applying orifices and passageways (brief, page ). The deficiency in this argument is that appellants are attacking the references individually when the rejection is based on a combination of references. *See In re Keller*, 642 F.2d 413, 426, 208 USPQ 871, 882 (CCPA 1981); *In re Young*, 403 F.2d 754, 757-58, 159 USPQ 725, 728 (CCPA 1968). As discussed above, the applied references in

combination would have fairly suggested, to one of ordinary skill in the art, using one of Kurimura's pressure monitoring devices with each of Sugaya's suction devices to detect the air leakage discussed by Kurimura at each suction device.

*Claim 7*

The appellants argue that Kurimura's apparatus is not capable of determining an attracting state based upon a plurality of attracting state parameters and controlling the apparatus based upon the determined attracting states (brief, page 6). Kurimura's apparatus, however, is capable of control based upon a plurality of attracting state parameters such as defects in the slide specimen, dust on the slide specimen surface, and defects in the specimen holding arm (col. 6, lines 34-60).

*Claim 8*

The appellants argue that Kurimura detects only leakage but not an obstruction of the suction means (brief, page 6). The inquiry under 35 U.S.C. § 103, however, is not merely what references expressly teach, but what inferences one of ordinary skill in the art reasonably would draw from them. *See In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Kurimura's disclosure that lack of normal vacuum is to be avoided (col. 6, lines 51-52) would have fairly suggested, to one of ordinary skill in the art, not only preventing lack of normal vacuum by avoiding air leakage, but also doing so by using a suction tube which provides sufficient suction, e.g., one which is not clogged.

*Claim 12*

The appellants argue that the applied references would not have suggested use of attracting state parameters to indicate at least two abnormal states (brief, page 8). Kurimura's apparatus, however, is capable of being used to indicate more than one abnormal state, such as defects in the specimen slide, dust on the specimen slide surface, and defects in the holding arm (col. 6, lines 34-60).

*Claim 14*

The appellants argue that Kurimura's apparatus is not capable of taking pressure measurements at two predetermined times after the suction pad begins applying suction to the analysis film, and comparing the suction pressure measurements with predetermined values to determine a state of the suction pad (brief, page 9; reply brief, pages 3-4). Kurimura, the

appellants argue, repeats entire inspections rather than making multiple measurements and carries out these inspections only when a malfunction occurs and, therefore, does not inspect at predetermined times (brief, pages 9-10). Each of Kurimura's inspections is a measurement of the suction pressure. Thus, his disclosure of four inspections (col. 6, lines 56-60) indicates that the apparatus is capable of providing multiple suction pressure measurements. The apparatus necessarily is capable of determining the state of the suction pad by carrying out each of the four measurements at some time after the previous measurement, i.e., at predetermined times.

*Claim 16*

Detecting both leaks and obstructions would have been fairly suggested to one of ordinary skill in the art by Kurimura for the reasons given above regarding claims 6, 8 and 12.

*Claim 9*

As discussed above regarding claim 14, Kurimura's apparatus is capable of monitoring the suction pressure at a plurality of predetermined times.

*Claim 11*

The appellants argue only that Scholten fails to make up for the deficiencies of the other applied references with respect to limitations in independent claim 6 and dependent claim 7 from which claim 11 depends (brief, page 11). This argument is not persuasive for the reasons given above regarding claims 6 and 7.

*Conclusion*

For the above reasons we conclude, based upon the preponderance of the evidence, that the claimed invention would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

*DECISION*

The rejections under 35 U.S.C. § 103 of claims 6-9, 12 and 14-17 over Sugaya in view of Kurimura, and claim 11 over Sugaya in view of Kurimura and Scholten, are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

*AFFIRMED*

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| CHARLES F. WARREN<br>Administrative Patent Judge | ) | |
| TERRY J. OWENS<br>Administrative Patent Judge | ) | BOARD OF PATENT APPEALS AND INTERFERENCES |
| BEVERLY A. PAWLIKOWSKI<br>Administrative Patent Judge | ) | |

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