

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

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Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MICHAEL S. GOOD,  
DOUGLAS W. JOHNSON, SUBRAHMANYAN NAGARAJAN,  
BRIAN L. RAPPEL, LAURENCE J. SCHMIDT,  
and DENNIS R. ZIEGENHAGEN

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Appeal No. 1998-0509  
Application 08/236,771<sup>1</sup>

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ON BRIEF

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Before HAIRSTON, BARRETT, and HECKER, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

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<sup>1</sup> Application for patent filed April 29, 1994, entitled "Direct Mounting System For A Disk Drive."

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This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1-30.

We reverse.

BACKGROUND

The disclosed invention is directed to an apparatus to mount a disk drive to a frame so as to not cause distortion to the housing of the disk drive.

Claim 1 is reproduced below.

1. An apparatus for storing data comprising:

a housing for the apparatus for storing data, said housing having openings therein; and

an insert within one of the openings of the housing, said insert including an electrical insulating material, and wherein the insert contains an opening that can receive a fastener, wherein the fastener fastens the housing to a frame by turning, and wherein the insert reduces distortion of the housing caused by torque of the fastener, wherein the torque results from the fastener turning.

THE PRIOR ART

The Examiner relies on the following prior art patents:

Worthing	4,846,612	July 11, 1989
Dupree	4,952,107	August 28, 1990
Wollar	5,039,267	August 13, 1991
Remise et al. (Remise)	5,136,466	August 4, 1992

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Remise, figures 1A and 1B, discloses a mounting arrangement for mounting a peripheral housing 4 (e.g., "a 5½-inch disk drive or reader, or a high-speed tape cassette unwinder" (col. 4, lines 23-24)) to side surfaces 11 and 12 of a support part 1. The housing has threaded holes 42B in its side which receive the threads 400 of a screw. An elastic grommet 41 fits over a throat 403 of the screw. The central junction section 412 of the grommet fits into cutouts 120A and 120B on side surfaces 11 and 12.

Dupree discloses a captive screw assembly for a removable panel. A screw is carried in a resilient washer having a lip for retaining the screw and deflectable fingers for insertion into a panel opening for retaining the washer and screw in the panel (abstract).

It turns out to be unnecessary to discuss the content of Worthing and Wollar.

#### THE REJECTIONS

Claims 1, 3-7, 12, 14-21, and 28-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Remise and Dupree. The Examiner concludes that it would have been obvious to extend the inserts 41 of Remise into the openings

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42B of the housing 4 in order to maintain the fasteners 40B in the vicinity of the housing when the fasteners are loosened in view of the teaching of Dupree (Final Rejection, page 3). The Examiner states (Final Rejection, pages 3-4) that the limitation "wherein the insert(s) reduce(s) distortion of the housing caused by torque of the fastener, wherein the torque results from fastener turning" in claims 1, 12, and 28 is inherently met by Remise as modified by Dupree.

Claims 2 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Remise and Dupree as applied in the rejection of claims 1 and 12, further in view of Wollar.

Claims 8-11 and 22-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Remise and Dupree as applied in the rejection of claims 1 and 12, further in view of Worthing.

We refer to the Final Rejection (Paper No. 8) and the Examiner's Answer (Paper No. 13) (pages referred to as "EA\_\_") for a statement of the Examiner's position and to the Appeal Brief (Paper No. 12) (pages referred to as

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"Br\_\_") for a statement of Appellants' arguments thereagainst.

OPINION

Claim interpretation

The last parts of claims 1 and 28 recite "wherein the insert[s] reduces distortion of the housing caused by torque of the fastener[s], wherein the torque results from the fastener[s] turning" (plural in claim 28). These limitations are considered to be purely functional because no structure or mechanism has been recited to support the function of reducing distortion and the claims are not in means-plus-function format. Claim 1 recites an "insert including an electrical insulating material" and claim 28 recites "electrically insulating inserts," which do not provide any structure for reducing distortion; compare claim 12 which recites "said insert including a deformable material." We interpret claims 1 and 12 to impliedly require the insert to be a deformable material as well as an electrically insulating material.

Obviousness

Appellants argue that "Remise contains no teaching or suggestion that an insert is within the opening of a housing and also contains no teaching or suggestion that screw 40B causes any distortion of peripheral housing 4 or that any such distortion would be a problem" (Br5). Appellants argue (Br5) that the purpose of the captive washer 11 in Dupree is to provide a cushion to grip when the screw is tightened that tends to resist loosening of the assembly due to vibration and Dupree does not recognize the distortion problem that Appellants' invention is directed to solve. Accordingly, it is argued, one of ordinary skill in the art would not have been motivated to use the resilient material of Dupree and the Examiner has used impermissible hindsight.

We have several problems with the Examiner's rejection.

First, the combination of Remise and Dupree does not suggest replacing the threaded hole 42B in Remise with a deformable insert. Remise discloses that the screw is screwed into the threaded hole 42B in the peripheral housing 4. Therefore, Remise clearly does not recognize the problem of distortion of the housing caused by torque on the screw

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and provides no motivation to modify the hole 42B.

Assuming, arguendo, that one of ordinary skill in the art would have been motivated to combine the teachings of Dupree with Remise, it seems to us that most logical correspondence of parts is as follows: the tubular nut 38 in plate 13 in Dupree corresponds to the threaded hole 42B in housing 4 in Remise; the panel 12 in Dupree corresponds to the side surfaces 11, 12 in Remise; the resilient captive washer 11 in Dupree corresponds to the grommet 41 in Remise; and the screw 10 in Dupree corresponds to the screw in Remise.

Thus, Dupree only would have suggested to one of ordinary skill in the art, replacing the grommet 41 in Remise with a captive washer in the side surfaces 11, 12 so that the screw would be retained in the side surfaces 11, 12 when the housing 4 is removed. The screw in Remise as modified would still screw into threads integral with the housing and would still cause distortion due to torque. The Examiner does not address the correspondences of parts between Dupree and Remise, and what they would have suggested to one of ordinary skill in the art, but just looks at the captive washer 11 in the opening of Dupree in isolation. We do not

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agree with the Examiner's conclusion that Dupree would have suggested extending the inserts 41 of Remise into the holes 42B.

Second, Remise discloses the elastic grommet 41, corresponding to the claimed insert, fits within an opening of the frame (one of the cutouts 120) that supports the housing and the purpose of the grommet is to provide cushioning (col. 4, lines 42-43). Therefore, Remise does not disclose the insert to be within an opening of the housing 4 and does not disclose that the grommet reduces distortion. Assuming, arguendo, that one of ordinary skill in the art would have been motivated to combine Remise and Dupree, as discussed in the preceding paragraph, Dupree does not suggest an insert in an opening of the housing. Remise as modified by Dupree would have suggested a structure where the screws and captive washers (the inserts) are carried in the side surfaces 11, 12 of Remise, not as inserts in the threaded hole 42B. Such an arrangement does not reduce distortion in the housing 4.

Third, Remise discloses that the screw/grommet assemblies screwed into the holes 42B of the peripheral

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housing 4 are engaged with cutout slots 110A, 110B, 120A, and 120B, presumably by the screw/grommet assemblies being pushed into the cutout slots. Therefore, Remise does not positively disclose that "the fastener fastens the housing to a frame by turning," as recited in claims 1 and 12, although the fastener is fastened to the housing by turning. The Examiner's rejection does not address this difference.

For the reasons discussed above, we conclude that the Examiner has failed to establish a prima facie case of obviousness with respect to independent claims 1, 12, and 28. The rejection of claims 1, 12, and 28, and dependent claims 3-7, 14-21, 29, and 30 is reversed. Worthing and Wollar, which are applied to various dependent claims, do not cure the deficiencies of Remise and Dupree. Thus, the rejections of claims 2, 8-11, 13, and 22-27 are reversed.

#### CONCLUSION

The rejections of claims 1-30 are reversed.

REVERSED

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	KENNETH W. HAIRSTON	)	
	Administrative Patent Judge	)	
		)	
		)	
		)	BOARD OF
PATENT		)	
	LEE E. BARRETT	)	APPEALS
	Administrative Patent Judge	)	AND
		)	INTERFERENCES
		)	
		)	
	STUART N. HECKER	)	
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