ABSTRACT OF THE DISCLOSURE

DISK DRIVE WITH PASSIVE MULTIPLE FLY HEIGHT SLIDER AND COOPERATIVE DISK PATTERN

A disk drive having a passive slider exhibiting two fly heights, one for recording and reading operations and a second for idling, is disclosed. The disk drive has a magnetic recording surface set for rotation in a direction. A transducer carrier is radially positionable relative to the magnetic recording surface and can be moved between recording portions and idling portions of the annular surface. In the idling zone the surface includes a plurality of shallow depressions (84,86) disposed in an annular zone. The depressions are generally trench like. The orientation of the depressions depends on the type carrier for the transducer. If oriented transversely to the direction of rotation of the magnetic recording surface, they will boost pressure under the carrier increasing or introducing spacing between the body and the carrier. Where the carrier has an air bearing surface including regions creating zones of relatively negative pressure, the depressions are grooves paralleling the direction of rotation of the disk. The grooves diminish the effectiveness of the zones of negative pressure to increase carrier fly height.

Fig. 5 (a-d)