

A B S T R A C TDISK DRIVE SLIDER LIFTER

5 In a slider lifter assembly for a conventional
disk drive assembly, a pair of wire support arms (38)
extend outward from a head positioning assembly (22)
adjacent opposite sides of a flexure arm (35) that
carries a slider (27). A lifting wire (40) is strung
10 between the opposing wire support arms (38) in the space
below the flexure arm (35) and outside the periphery of
the disk (20). The lifting wire (40) is formed from a
shape memory alloy having martensitic and austenitic
phase conditions. The wire (40) is arranged to lift the
15 flexure arm (35) sufficiently to lift the slider (27)
off the surface of the disk (20) when the wire is in the
austenitic phase condition while allowing the slider to
rest on the disk surface when the wire is in the
martensitic phase condition. The wire is selectively
20 electrically heated to change its state from one phase
condition to the other, so that, when power is applied
to start the disks rotating, the sliders (27) are lifted
from their rest positions in contact with the disks,
when the disks are rotating at operational speed, the
25 sliders (27) are allowed to approach the disks and fly
independently, when power is removed to stop the disks,
the sliders (27) are again lifted, and when the disks
have stopped, the sliders are allowed to rest on the
disks. The wire support arms are formed integrally with
30 the flexure assembly and the lifting wire is coated with
an insulating material.

[Figure 2]