SOFT COVER INTERNAL STRUCTURE, THAT CAN PROVIDE THE STABILITY WHILE THE SOFT COVER IS DEPLOYED IN READING MODE (AROUND 110~120 TILTING DEGREE)

HP INC
Title: Soft cover internal structure, that can provide the stability while the soft cover is deployed in reading mode (around 110~120 tilting degree).

This disclosure relates to the field of notebook’s soft cover, which is utilized as stand to support notebook’s gesture as well as a protection piece. That is requiring certain structure to offer the stability of standing, in the same time it also need to be flexible enough to wrap the notebook as a protective cover.

A program that is disclosed with such idea developed during its development phase. When we noticed the soft cover material creates the conflict for providing the protection and stability in same component. Which is a fundamental problem that needs a proper solution without changing the material as well as the design.

In most recent detachable notebooks, the stand may be a component formed together with keyboard deck. The stand is able to support the notebook in certain defined angles, that should be stable enough whenever it’s operated on desktop or on lap. This condition gives challenge of designing the soft cover stand. Since the cover is made by soft material, which has characteristic of flexibility to wrap the slate as protection material, but the flexibility is a conflict to offer the stability of stand function. Therefore, when the other products have stand function in soft cover, those always lack of stability for use. If the soft material is a “must”, then the stability issue must be solved by some other way. Hence this disclosed structure has been developed to enhance the stability without changing the soft material. An additional soft material middle layer (show in below diagram) is inserted in between the top layer (show in below diagram) and bottom layer (show in below diagram) as sandwich structure, plus an empty room beyond the middle layer. The structure is going to offer the tension that prevents the soft cover bend toward bottom side, but still flexible to bend top side. That means, the soft cover has its flexibility to one side for protection purpose and still have its rigidity as stand function since it won’t bend to the other side.
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