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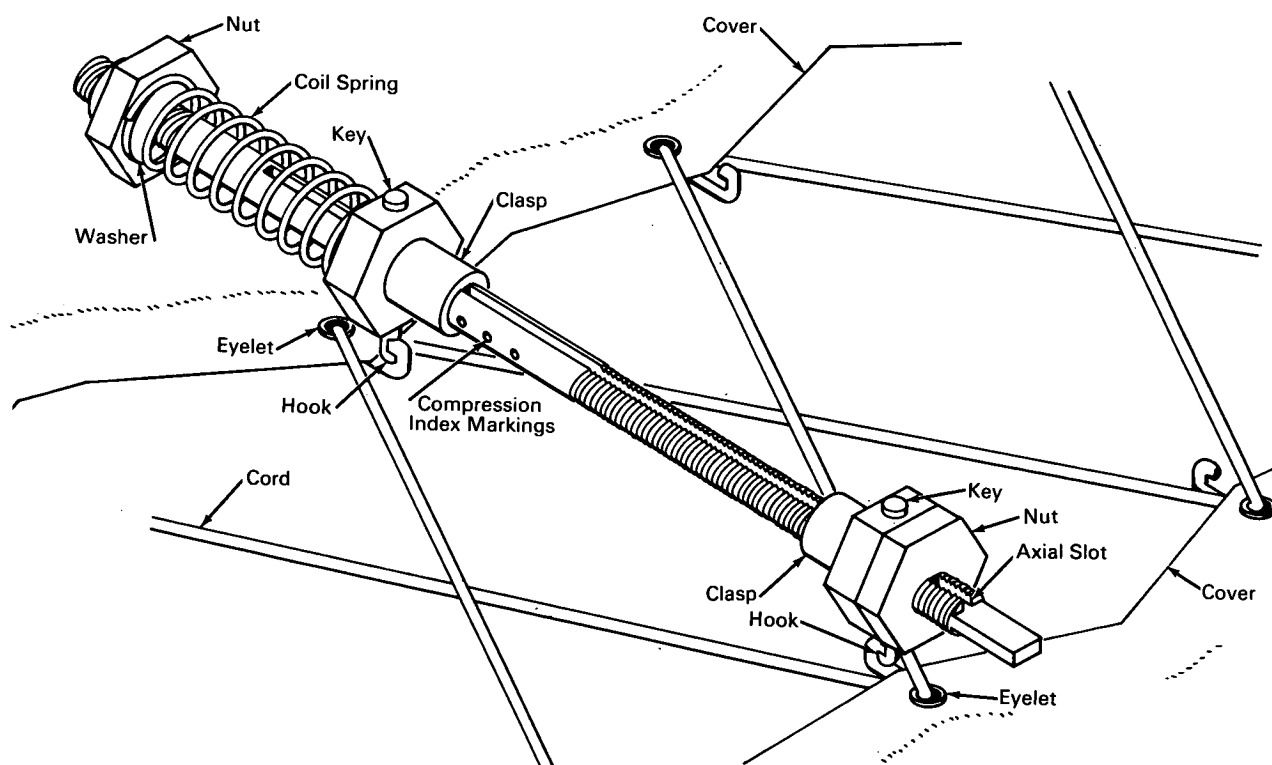
Brief 66-10301

NASA TECH BRIEF



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Tool Pre-Tensions Covers Prior to Lacing



The problem:

To compactly store bulky objects and draw covers over them to secure them against the motions of a randomly moving storage compartment. Previously, pry bars have been used to draw the covers tight prior to lacing but these can damage the storage compartment, stored objects, or covers by accidental bumping, slipping, or overloading.

The solution:

A cinching or tightening tool, used in required

multiples, that draws two opposing cover halves together at predetermined tension to permit quick lacing to retain the stored object.

How it's done:

The tool consists of a threaded, axially slotted shaft marked with a compression index, two unthreaded clasps provided with hooks, and a key that engages the shaft axial slot. A coil spring on the shaft bears against a clasp on one end and a washer retained by a nut at the other end.

(continued overleaf)

In use, the clasp hooks are inserted into the cover eyelets and the washer retaining nut is tightened on the shaft, drawing both clasps together so that the cover halves are drawn together, compacting the stored object in its compartment. Lacing cords are then drawn through the eyelets to effect a permanent closure and the tools are removed.

Notes:

1. This item could be useful in the rapid securing of a variety of covers to predetermined tensions.
2. In fabrication industries, this tool could be useful in drawing components together during assembly or treating.

3. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
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Patent status:

No patent action is contemplated by NASA.

Source: Marvin A. Forman and Robert C. Vogel
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