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NASA TECH BRIEF

John F. Kennedy Space Center

A Cable Stabilizer for Outdoor Elevators

The problem:

Cables that carry outdoor elevators are often subject to horizontal swaying in the wind. Such a disturbance prevents the outdoor elevators from stopping at a precise location, causes interference with cable spooling, and imposes unnecessary cable wear as a result of cables rubbing against one another.

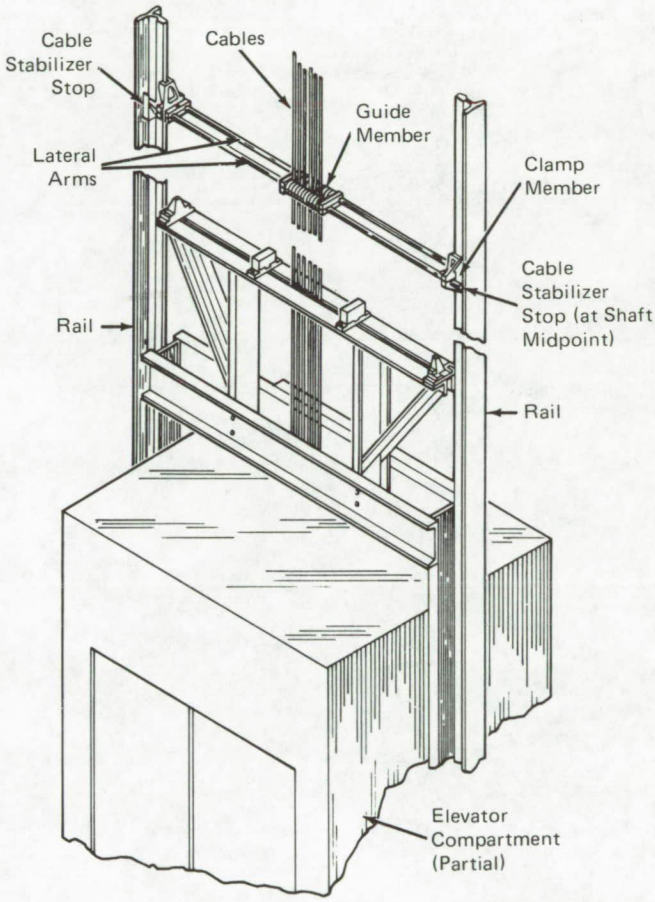
The solution:

A cable stabilizer has been developed for outdoor elevators that prevents cables from swaying in the wind.

How it's done:

The stabilizer shown in the figure contains a guide member which has two opposing rows of rollers enclosing the elevator cables. Each opposing pair of rollers is spaced slightly farther apart than the cable diameter to allow free movement of the cable. The guide member is supported by two laterally extended arms which are attached to the elevator rails by two clamp members. These clamp members allow the stabilizer to ride only the upper half of the elevator shaft and to be stopped by the two stops which are bolted to the rails at the midpoint of the shaft. The stops do not interfere with the elevator operation. Each stop contains a rubber capped telescoping plunger supported by a spring to absorb the contact with the stabilizer assembly.

When the elevator is on the ground level, the cables are extended to their extreme length, which provides their maximum exposure to wind disturbance. However, the stabilizer, which is now located at the midpoint of the shaft, gives a rigid horizontal support that virtually prevents the cables from swaying. When the elevator rises and reaches the midpoint in its ascent, the cables are sufficiently shortened and require no stabilization. Past this point, the elevator will push the stabilizer up with it. On descent, the stabilizer will come to rest on the stops at the midpoint as the elevator continues down.



Note:

Requests for further information may be directed to:

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Reference: B72-10283

(continued overleaf)

Patent status:

INVENTION OWNED BY NASA-PATENT ISSUED TO NASA. This invention has been patented by NASA (U.S. Patent No. 3,666,051) and license rights will be granted for its commercial development. Inquiries about obtaining a license should be addressed to Patent Counsel, AD-PAT, John F. Kennedy Space Center, NASA, Kennedy Space Center, Florida 32899

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