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# New Space Footwear 'Shoos' Human Flies

## Magnetic Brogans By Westinghouse Will 'Tie Down' Rambling Astronauts

When human flies are made Westinghouse will shoe them.

This is the promise of a powerful new "on-off" magnet developed by the Pittsburgh electric company.

Because of the unique on-off feature, a man rooted upside down on a steel beam by his magnet-mounted shoes can free one foot at a time by pushing a small button in one hand.

The button speeds a small pulse of electricity to that one shoe and weakens the magnetic force enough so that the man can easily free the magnet and take a step.

Another pulse then restores the strong magnetism, holding foot and magnet fast.

### Engineers' Belief

This simple system, Westinghouse engineers believe, may provide the answer for men walking around in and on the outside of spacecraft in the weightlessness of outer space.

"This marks a radical change from the behavior of conventional magnets," said Dr. George Wiener, magnetics department man-

will—thus, in effect, turning the "grip" on or off at the desired end.

The magnet also has a "memory." It "remembers" its direction of greatest magnetic pull indefinitely.

This enables it to be controlled more easily.

Developed by Westinghouse Engineer Ray J. Radus, the magnet already has been used to build small, reliable direct-current relays that eliminate pawls, ratchets and springs.

### Being Studied

It is being studied as a remote-control lock for the doors, trunk and hood of autos.

Mr. Radus described the circuit as a three-layer sandwich, with the middle layer a ceramic magnet and the outer two of soft steel.

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