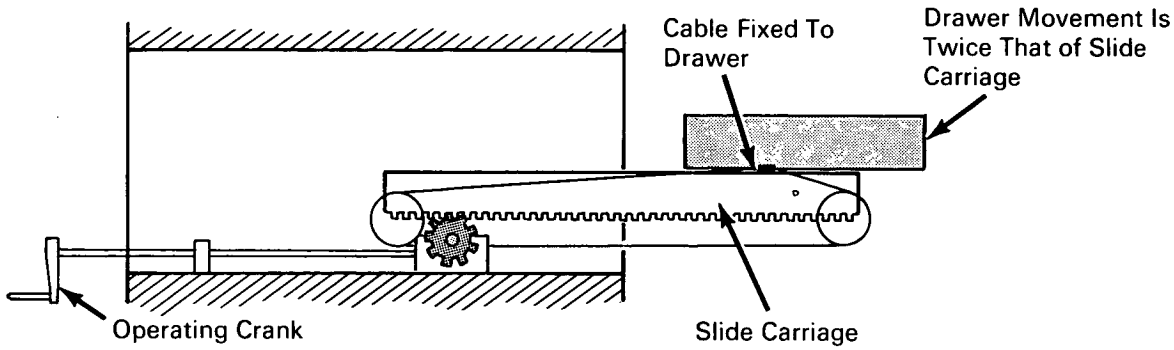
AEC-NASA TECH BRIEF

Carriage System Remotely Moves Drawer Over Extended Distance



The problem:

In the transferring of material remotely through thick radiation shielding walls, it is normal practice to design a transfer system consisting of a drawer which holds the material on a slide arrangement operated by a crank and gear system. When the drawer is extended through the wall on either side, the slide mechanism usually projects beyond the drawer. It was desired to design a more efficient system to eliminate the feature of the slide hardware projecting beyond the drawer when the drawer is extended its full distance.

The solution:

The drawer is mounted on rollers which operate on rails carried on a slide carriage. The slide carriage moves by crank through gearing on ball slides. The drawer is moved by a cable loop which runs around pulleys attached to the slide carriage.

How it's done:

The drawer extends out from the wall for easy loading or unloading without requiring that associated slides or supporting members extend farther than the drawer. This is accomplished by mounting the drawer on rollers which operate on rails carried on the slide carriage. The slide carriage moves on ball slides similar to those used in steel filing cabinets. It is moved to either side of the wall cavity by turning a crank which operates through a gear mechanism against a gear rack on the carriage. The drawer is fastened to a light steel cable which runs around end pulleys attached to the slide carriage. The return length of the cable is fixed to the stationary wall liner. Thus, as the carriage is moved from its central position in the wall cavity toward either side of the wall, the drawer is pulled in the same direction but twice as fast as the carriage. Since the drawer starts its travel in the center of the wall cavity and must move to the end of the carriage, which is much longer, it will travel twice as far as the carriage in order to reach the loading position.

Note:

Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
AEC-NASA Space Nuclear Propulsion Office
U.S. Atomic Energy Commission
Washington, D.C. 20545
Reference: B66-10711

(continued overleaf)

Patent status:

No patent action is contemplated by AEC or NASA.

Source: G. H. Salzano
of Parsons-Jurden Corporation
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