OAK RIDGE NATIONAL LABORATORY
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Variable Width Extrusion for Additive Manufacturing with Orientable Rectangular Nozzle

Disclosure Number

201403258

Technology Summary

The invention relates to manufacturing and more specifically to additive manufacturing.
Fused deposition manufacturing (FDM) makes use of a nozzle to deposit beads of material in layers to form objects. Larger nozzle orifices make wider extrusion beads and have high throughput but cannot create fine detail. Small orifices can create fine detail but suffer from low material throughput rates. This invention addresses both of these needs and allows greater material deposition rates while retaining the ability to create fine detail.

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