

# Inventor creates Card Beams with 3D printer

23 May 2013, by Heather Leighow



Virgil Breeden's Card Beams.

What are card beams, you may ask? They are the building toy that allows you to build gravity-defying houses of cards with the help of friction, gravity, and two types of beams - the cap and the connector.

Virgil Breeden, the inventor behind Card Beams, came to the Mississippi Polymer Institute at The University of Southern Mississippi with a simple question: why can't building a house of cards be easier? Using any other method might involve glue or pins, and could take hours. Breeden brought MPI sketches of an idea, which were used to build 3D [computer aided design](#) drawings that could then be printed on MPI's state-of-the-art Objet 3D printer.

Ty Posey, technical services leader at MPI, produced the prototypes in different materials and at different sizes until they were just right for the inventor's needs. After a few design iterations, two

different pieces were chosen - the "cap" and the "connector." The cap has a flat bottom and four inserts, which allows for stacking cards on a [flat surface](#). The connector has inserts all the way around to allow for six [cards](#) to be plugged in at one time.

Once the card beams were selected, Breeden applied for the patent, took his prototypes to an extrusion manufacturer and chose a custom packaging company for the packaging portion of commercialization.

Breeden is in the initial stages of being funded and has a website where interested parties can donate to back his project: [www.kickstarter.com/projects/1... build-the-impossible](http://www.kickstarter.com/projects/1... build-the-impossible) .

**More information:** For more information on MPI's 3D printing capabilities, visit [www.thepolymerinstitute.com/ra... ing/3D-printing.html](http://www.thepolymerinstitute.com/ra... ing/3D-printing.html)

Provided by University of Southern Mississippi

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