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Subject: Roll-Back Racer

Posted by [j davidbush](#) on Mon, 30 Mar 2009 02:17:30 GMT

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Hi Shapies!

I wanted to share with you the success (and failure) I've had so far printing the Roll-Back Racer (similar to the car in this blog).

Let me mention, this is the second printing of the car. Unfortunately, the first car had a few problems as the gears in the middle were fused to the axle and the entire right side of the spring was fused to its housing. I made some minor changes and then uploaded/printed it again.

Here is the new model!

I modeled the car to fit pre-existing rubber L\*GO tires (and it fits either thin low-profile tires or thick off-road tires).

And, here it is without its tires. It looks kinda naked without them.

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Subject: Re: Roll-Back Racer

Posted by [j davidbush](#) on Mon, 30 Mar 2009 03:00:02 GMT

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I also wanted to attach a couple videos. This first one is a close-up of the spring and gear mechanism.

Spring and Gears

This print still has a few problems. The biggest one is that the large gear doesn't always remain in contact with the medium gear, so the car needs a little help (sometimes a lot of help!) winding up and taking off. Here is a video of it in action!

Go, Speed Racer

I have to apologize for the quality of these videos. I had much better ones planned but, while I was preparing them, my DVD drive decided it didn't want to read Mini DVDs (from my video camera).

Stay tuned for future updates. I'll be making changes to see if I can't get the rest of the kinks ironed out.

~David

P.S. If you're feeling up to it, please give the model a rating!

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Subject: Re: Roll-Back Racer

Posted by [frankbuss](#) on Mon, 30 Mar 2009 06:48:37 GMT

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That's nice, I'll rate it after the contest. Maybe it would be easier for moving parts to create single parts, like in model kits you can buy, or see this example, because then you can design much smaller clearance and you can polish the parts before mounting.

Regarding the moving part contest: Looks like Whystler has given the movingpart tag to his nice Nocturnal Watch, which was already submitted some time ago, so it has a high rating. Maybe would be a good idea for the next contest that all parts for the contest have to be submitted until some date and then a special vote, not related to the normal rating, for these parts can be done until another date (maybe a week later), something like the poll function, but for models.

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Subject: Re: Roll-Back Racer

Posted by [Whystler](#) on Mon, 30 Mar 2009 13:32:11 GMT

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Hey David,

I adored your racer from when I first saw it. It's good to see the ongoing updates here. I find reading the processes and trials and tribulations of other folks' work very interesting. Thanks for sharing.

I gave it full marks!

Why would you wait until after the contest to rate it frankbuss? That's the point I think. If you love

it, give it high marks so it get's closer to winning buddy! This is a contest, not a strategic voting game. The best model wins.

-Whystler

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Subject: Re: Roll-Back Racer  
Posted by [frankbuss](#) on Mon, 30 Mar 2009 16:53:07 GMT  
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Hi Whystler,

you are right. It is better than my model, so I've voted for it, maybe it gets even more points than your nice, but old model

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Subject: Re: Roll-Back Racer  
Posted by [j davidbush](#) on Tue, 31 Mar 2009 02:01:45 GMT  
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Thank you guys for the kind words and encouragement!

@Frank: Yes. It would probably be easier to model the car as a snap-together kit, however, I've certainly enjoyed the challenge of trying to get this one to print pre-assembled (not to mention all the useful information that comes out of doing "clearance" experiments!).

@Whystler: I totally agree. I always look forward seeing all the high quality models that everybody has created. Especially the "It Arrived!" posts. They're great.

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Subject: Re: Roll-Back Racer  
Posted by [j davidbush](#) on Tue, 31 Mar 2009 02:33:04 GMT  
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Here are a few more photos...

A couple from the "right" side.

And, the car equipped with smaller, low-profile tires.

Also, for anybody who may be interested in a little technical data regarding the moving part clearances:

All four axles have diameters of 5mm.

The two wheel axles have gaps of 0.6mm (on both sides) between the axles and the frame.

The two other axles have gaps of 0.75mm between the axles and the gears. (In the first version of the model, the gaps were only 0.6mm but the gears were fused to the axles.)

-David

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Subject: Re: Roll-Back Racer

Posted by [rawkstar320](#) on Tue, 31 Mar 2009 03:38:41 GMT

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Wow. that is way too cool. Im thinking that the moving parts contest is yours. haha.

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Subject: Re: Roll-Back Racer

Posted by [er1c](#) on Fri, 03 Apr 2009 09:05:56 GMT

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congratz Jdavidbush, Frankbuss and Whystler on the competition results. I think all 3 are great entries.

There is something about the roll back racer as an entry to the competition that has been troubling me.... Please understand I'm not trying to question the results to the competition, but rather to see what thoughts others have on the issue.

I appreciate how much work is needed to turn a concept into a working printable object (sometimes much more than working out the initial concept), but isn't the roll back racer too similar to Wouter Scheublin's design. (so much so that I thought it was by the same author when I first saw it in the gallery) I did give it a high vote because I think it would be a great model if it is printable and the roll back spring action works.

I suppose originality is only part of the judging criteria, along with how refined and printable the model is. (I think maybe I'm too used to design competitions where the concept is key and complete resolution is impossible for the scope of the comp)

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Subject: Re: Roll-Back Racer

Posted by [virtox](#) on Fri, 03 Apr 2009 10:38:30 GMT

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Quote:There is something about the roll back racer as an entry to the competition that has been troubling me ..... but isn't the roll back racer too similar to Wouter Scheublin's design. (so much so that I thought it was by the same author when I first saw it in the gallery) I did give it a high vote Smile because I think it would be a great model if it is printable and the roll back spring action works.

I had the exact same feeling and thoughts, but didn't know how to say it without it making sounding like I'm a sore loser

Or like some anonymous commenter I saw at previous contests

Jdavidbush obviously put a lot of work and time in it.

This and the fact that it very clearly states in the contest blog, community votes count, so if it happens, it happens

Quote: I suppose originality is only part of the judging criteria, along with how refined and printable the model is. (I think maybe I'm too used to design competitions where the concept is key and complete resolution is impossible for the scope of the comp)

I had expected more designs that would have been 3d print only, things, you can hardly make any other way, but then again, this was my philosophy.

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Subject: Re: Roll-Back Racer

Posted by [Whystler](#) on Fri, 03 Apr 2009 14:38:20 GMT

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I think there are enough differences to know that David designed it himself from the ground up. I think there are enough similarities to know that he took inspiration directly from Wouter. David was upfront with that in his note up top.

I suppose you could think about analogies... If someone did a recreation of a DaVinci moving model (like one of his flying vehicles), would that have been worse because it copied it

completely?

We do know that his rollback racer is printable and functional from the videos.

Truly, you can't make molds of any of these pieces, because of their moving parts. The fact that they were printed entirely functional with no assembly makes them producible as-is only on a 3D printer. At least that's my thinking.

Virtox is right though. It was popular vote, and advertised as such. If Shapeways decided on the winner, they may have had different criteria.

-Whystler

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Subject: Re: Roll-Back Racer  
Posted by [j davidbush](#) on Fri, 03 Apr 2009 22:20:31 GMT  
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Thank you to everyone who voted (and Shapeways)! I really appreciate the encouragement and inspiration.

...

Also, I apologize to anyone who may have any hard feeling regarding fairness or the similarity between my car and Wouter Scheublin's car.

It was certainly not my intention to create any problems for this contest as I've been quite disappointed by some of the Anonymous comments (as Virtox mentioned) in previous contests.

Regarding similarity, I can only ask that you please recall the description of the moving parts contest:

"Can you make the best moving part? Something with an axle or flexibility or even gears perhaps? Something akin to these cars? [Pictures of Wouter's car and pzich's Test Car] Or something completely different?".

Based on that description, I didn't imagine anyone in the community would have a problem with an entry that was similar to Wouter's car. I only wanted create a fun, affordable model for those of us who were wowed by his creation. (I certainly was. I think his car is amazing.)

~David

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Subject: Re: Roll-Back Racer  
Posted by [virtox](#) on Fri, 03 Apr 2009 22:37:00 GMT  
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Must admit, I missed the "akin" part  
I think it was mainly the surprise; to see an object-type win, that was presented as an example to the comp.

But just to be clear, there are no hard feelings, enjoy your price, you earned it !

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