

Fuligin invented

The Urth list — 16 messages, 8 voices, 16 Jan 2008

<https://urth.darkrealm.vip/thread/urth/4972>

Exported from an unofficial mirror of a public mailing list. Copyright in each message remains with the person who wrote it. Email addresses are obscured as `user at host`, the form the original archive published. This file was rebuilt from parsed fields rather than retained headers, so it is faithful in content but not byte-exact.

Lane Haygood — 16 Jan 2008, 22:59 · in reply to Daniel D Jones

You and me both.

/Now, if only I could get someone to forge me _Terminus Est_...

Lane

On Jan 16, 2008, at 5:00 PM, Daniel D Jones wrote:
At least, that was the first thing I thought of when I read this article:

<http://www.physorg.com/news119554586.html>

Daniel D Jones — 16 Jan 2008, 23:00

At least, that was the first thing I thought of when I read this article:

<http://www.physorg.com/news119554586.html>

Matthew Keeley — 16 Jan 2008, 23:06 · in reply to Lane Haygood

On Jan 16, 2008 10:59 PM, Lane Haygood <lhaygood at gmail.com> wrote:
You and me both.

/Now, if only I could get someone to forge me _Terminus Est_...

Lane

Well, you could at least imitate the good Dr. Talos:
http://www.swordcane.com/burger_swords_home.htm

Of course, you might have to break a few minor state laws to do so, but it's a small price, surely?

-Matt

brunians at brunians.org — 17 Jan 2008, 00:29 · in reply to Lane Haygood

I believe that TE is based on an actual type of executioner's sword.

.

You and me both.

/Now, if only I could get someone to forge me _Terminus Est_...

Lane

On Jan 16, 2008, at 5:00 PM, Daniel D Jones wrote:

At least, that was the first thing I thought of when I read this article:

<http://www.physorg.com/news119554586.html>

gwern0 at gmail.com — 17 Jan 2008, 01:01 · in reply to brunians at brunians.org

On 2008.01.16 19:29:27 -0500, brunians at brunians.org scribbled 0.5K characters:

I believe that TE is based on an actual type of executioner's sword.

Yes. I was surprised when I happened to be reading a book on torture and other judicial punishments and came across its description of a 'sword of justice' <https://secure.wikimedia.org/wikipedia/en/wiki/Sword_of_Justice>, a distinct style of swords. If you look at this picture of one <http://commons.wikimedia.org/wiki/Image:Noe_sword.jpg>, you'll notice the described characteristics of our beloved Terminus Est!

gwern

NATIA DIA Burns espionage 97 utopia orthodox Meade cond SOCIMI

matthew at calmeilles.co.uk — 17 Jan 2008, 09:26 · in reply to brunians at brunians.org

brunians at brunians.org wrote:

I believe that TE is based on an actual type of executioner's sword.

Developed from the bastard or hand and a half sword in Europe although I've not come across a reference to anything quite as long as TE is described.

Matthew

Steven — 17 Jan 2008, 16:45 · in reply to matthew at calmeilles.co.uk

Nor with a vein of mercury running down its length.

On Jan 17, 2008, at 4:26 AM, matthew at calmeilles.co.uk wrote:

I've not come across a reference to anything quite as long as TE is described.

Steven

<http://bowenfineart.com/>

brunians at brunians.org — 17 Jan 2008, 16:58 · in reply to matthew at calmeilles.co.uk

That sucker in the wiki article was as long as TE. Couldn't tell if it had a mercury channel, but that kind of thing would be obvious. I have heard of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

.

brunians at brunians.org wrote:

I believe that TE is based on an actual type of executioner's sword.

Developed from the bastard or hand and a half sword in Europe although I've not come across a reference to anything quite as long as TE is described.

Matthew

Matthew Keeley — 17 Jan 2008, 18:01 · in reply to brunians at brunians.org

On Jan 17, 2008 4:58 PM, <brunians at brunians.org> wrote:
That sucker in the wiki article was as long as TE. Couldn't tell if it had a mercury channel, but that kind of thing would be obvious. I have heard of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

According to the Wikipedia article, "The Sword of Justice at the Higgins Armory Museum is a fine example of such ceremonial weapons used to designate status and authority." If that's the sword in the picture, that's really neat, as the Higgins is only about fifteen minutes' walk from my house. I'll check it out next time I'm at home (i.e. in six months) and ask about weights and mercury in blades of that type. If anyone would know about that sort of thing, it's the folks at the Higgins. I'll see if I can get some relevant pictures as well.

I recall that Wolfe mentioned basing TE off real swords, so I wouldn't be surprised if the Higgins had something similar.

So... report forthcoming I guess.

-Matt

Lane Haygood — 17 Jan 2008, 18:20 · in reply to Matthew Keeley

I've never heard of an actual mercury channel in a sword. I can ask on a swordsmanship forum I frequent (where several smiths post) to see if it's feasible. From what I understand of sword structure, it's not. You need the center part of the sword to be the strongest part, and that usually means it needs to be softer and more ductile than the surrounding steel. Cutting a big channel out of the middle of it might weaken its structural integrity to the point where it would be useless for cutting.

The idea is that the edges, the parts that need to be sharp, should be harder. When steel hardens, it becomes more brittle. Brittle steel will sharpen and hold an edge. But it's also weak. If you made the whole sword out of really hard steel it would chip and shatter whenever it made contact with something. So you make the non-edge part of the sword out of softer, more flexible metal so that it will actually absorb shock. But cutting a big channel out of the middle would remove a lot of the shock-absorbing material.

Lane

On Jan 17, 2008, at 12:01 PM, Matthew Keeley wrote:

On Jan 17, 2008 4:58 PM, <brunians at brunians.org> wrote:

That sucker in the wiki article was as long as TE. Couldn't tell if it had
a mercury channel, but that kind of thing would be obvious. I have heard

of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

According to the Wikipedia article, "The Sword of Justice at the Higgins Armory Museum is a fine example of such ceremonial weapons used to designate status and authority." If that's the sword in the picture, that's really neat, as the Higgins is only about fifteen minutes' walk from my house. I'll check it out next time I'm at home (i.e. in six months) and ask about weights and mercury in blades of that type. If anyone would know about that sort of thing, it's the folks at the Higgins. I'll see if I can get some relevant pictures as well.

I recall that Wolfe mentioned basing TE off real swords, so I wouldn't be surprised if the Higgins had something similar.

So... report forthcoming I guess.

-Matt

Dan'l Danehy-Oakes — 17 Jan 2008, 18:37 · in reply to Lane Haygood

All true ... But ... Do we know of what metal "Terminus Est" is actually made? Even if Severian calls it steel (which I don't recall offhand), that could be a "translation factor," after all. Who's to say that TE isn't a "galaxy level" piece of technology, some bit of metallurgical alchemy far beyond what we can produce right now?

On Jan 17, 2008 10:20 AM, Lane Haygood <lhaygood at gmail.com> wrote:
I've never heard of an actual mercury channel in a sword. I can ask on a swordsmanship forum I frequent (where several smiths post) to see if it's feasible. From what I understand of sword structure, it's not. You need the center part of the sword to be the strongest part, and that usually means it needs to be softer and more ductile than the surrounding steel. Cutting a big channel out of the middle of it might weaken its structural integrity to the point where it would be useless for cutting.

The idea is that the edges, the parts that need to be sharp, should be harder. When steel hardens, it becomes more brittle. Brittle steel will sharpen and hold an edge. But it's also weak. If you made the whole sword out of really hard steel it would chip and shatter whenever it made contact with something. So you make the non-edge part of the sword out of softer, more flexible metal so that it will actually absorb shock. But cutting a big channel out of the middle would remove a lot of the shock-absorbing material.

Lane

On Jan 17, 2008, at 12:01 PM, Matthew Keeley wrote:

On Jan 17, 2008 4:58 PM, <brunians at brunians.org> wrote:

That sucker in the wiki article was as long as TE. Couldn't tell if it had

a mercury channel, but that kind of thing would be obvious. I have heard of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

According to the Wikipedia article, "The Sword of Justice at the Higgins Armory Museum is a fine example of such ceremonial weapons used to designate status and authority." If that's the sword in the picture, that's really neat, as the Higgins is only about fifteen minutes' walk from my house. I'll check it out next time I'm at home (i.e. in six months) and ask about weights and mercury in blades of that type. If anyone would know about that sort of thing, it's the folks at the Higgins. I'll see if I can get some relevant pictures as well.

I recall that Wolfe mentioned basing TE off real swords, so I wouldn't be surprised if the Higgins had something similar.

So... report forthcoming I guess.

-Matt

gwern0 at gmail.com — 17 Jan 2008, 19:44 · in reply to Lane Haygood

On 2008.01.17 12:20:21 -0600, Lane Haygood <lhaygood at gmail.com> scribbled 2.3K characters:

I've never heard of an actual mercury channel in a sword. I can ask on a swordsmanship forum I frequent (where several smiths post) to see if it's feasible. From what I understand of sword structure, it's not. You need the center part of the sword to be the strongest part, and that usually means it needs to be softer and more ductile than the surrounding steel. Cutting a big channel out of the middle of it might weaken its structural integrity to the point where it would be useless for cutting.

When it was described, the way I thought it was done was like this: swords sometimes have 'blood grooves' (fullers), right? This produces a slight volume down the middle which you could fill up - maybe you could weld a flat strip down the length of the blade, or fold over a section of the blade and create a sealed space that way. To make it symmetrical you could either do the same thing to the other side (if the blade in cross-section kind of looks like an I-beam), or have just a single fuller/mercury-channel. It'd be very tricky to have a good welded channel or to preserve the void while working it in the other method, yes, but it doesn't seem impossible to this layperson. :)

The idea is that the edges, the parts that need to be sharp, should be harder. When steel hardens, it becomes more brittle. Brittle steel will sharpen and hold an edge. But it's also weak. If you made the whole sword out of really hard steel it would chip and shatter whenever it made contact with something. So you make the non-edge part of the sword out of softer, more flexible metal so that it will actually absorb shock. But cutting a big channel out of the middle would remove a lot of the shock-absorbing material.

Lane

I don't think fullers are always cut -

<[https://secure.wikimedia.org/wikipedia/en/wiki/Fuller_\(weapon\)](https://secure.wikimedia.org/wikipedia/en/wiki/Fuller_(weapon))> says you could also just press or bend the blade.

gwern

Macintosh Fortezza Ortega GAFE Internet Fox WQC wire SLI Gist

gwern0 at gmail.com — 17 Jan 2008, 20:13 · in reply to Matthew Keeley

On 2008.01.17 18:01:57 +0000, Matthew Keeley <matthew.keeley.1 at gmail.com> scribbled 1.0K characters:

On Jan 17, 2008 4:58 PM, <brunians at brunians.org> wrote:

That sucker in the wiki article was as long as TE. Couldn't tell if it had a mercury channel, but that kind of thing would be obvious. I have heard of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

According to the Wikipedia article, "The Sword of Justice at the Higgins Armory Museum is a fine example of such ceremonial weapons used to designate status and authority." If that's the sword in the picture, that's really neat, as the Higgins is only about fifteen minutes' walk from my house. I'll check it out next time I'm at home (i.e. in six months) and ask about weights and mercury in blades of that type. If anyone would know about that sort of thing, it's the folks at the Higgins. I'll see if I can get some relevant pictures as well.

I recall that Wolfe mentioned basing TE off real swords, so I wouldn't be surprised if the Higgins had something similar.

So... report forthcoming I guess.

-Matt

Actually, if you do go, I would love for you to get some more pictures and especially note down any information appertaining to swords of justice - I wrote the Wikipedia article, but I didn't take the picture of the sword, and I've always been slightly worried that it wasn't what it seemed to be. (Also, my sources on the topic were thinner than I'd've liked.)

gwern

Macintosh Fortezza Ortega GAFE Internet Fox WQC wire SLI Gist

brunians at brunians.org — 17 Jan 2008, 20:20 · in reply to Lane Haygood

I know what you are talking about, here, but if I am right it should be possible by making the middle part extra thick. You might even want to run a brass tube up it after you bore it out and put the mercury inside the brass tube. That should do it. And you could maintain it if you ran the end of the tube up into the tang and put a screw cap on it.

.

I've never heard of an actual mercury channel in a sword. I can ask on a swordsmanship forum I frequent (where several smiths post) to see if it's feasible. From what I understand of sword structure, it's not.

You need the center part of the sword to be the strongest part, and that usually means it needs to be softer and more ductile than the surrounding steel. Cutting a big channel out of the middle of it might weaken its structural integrity to the point where it would be useless for cutting.

The idea is that the edges, the parts that need to be sharp, should be harder. When steel hardens, it becomes more brittle. Brittle steel will sharpen and hold an edge. But it's also weak. If you made the whole sword out of really hard steel it would chip and shatter whenever it made contact with something. So you make the non-edge part of the sword out of softer, more flexible metal so that it will actually absorb shock. But cutting a big channel out of the middle would remove a lot of the shock-absorbing material.

Lane

On Jan 17, 2008, at 12:01 PM, Matthew Keeley wrote:

On Jan 17, 2008 4:58 PM, <brunians at brunians.org> wrote:

That sucker in the wiki article was as long as TE. Couldn't tell if it had a mercury channel, but that kind of thing would be obvious. I have heard of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

According to the Wikipedia article, "The Sword of Justice at the Higgins Armory Museum is a fine example of such ceremonial weapons used to designate status and authority." If that's the sword in the picture, that's really neat, as the Higgins is only about fifteen minutes' walk from my house. I'll check it out next time I'm at home (i.e. in six months) and ask about weights and mercury in blades of that type. If anyone would know about that sort of thing, it's the folks at the Higgins. I'll see if I can get some relevant pictures as well.

I recall that Wolfe mentioned basing TE off real swords, so I wouldn't be surprised if the Higgins had something similar.

So... report forthcoming I guess.

-Matt

Lane Haygood — 17 Jan 2008, 20:57 · in reply to Dan'l Danehy-Oakes

That's one of the things commonly debated in sword-aficionado circles (metallurgy, not Gene Wolfe). The problem is something on a more basic level -- there is a constant, almost-perpetual trade-off between the properties that make a sword useful. The harder something is (e.g., diamond) the more brittle it is in larger blades. But the softer something is, the more of a chance it will set at an unnatural angle or be impossible to sharpen.

Even with metals other than steel that display a greater strength (e.g., titanium) there are

other, associated defects. Titanium is lighter than steel, which means that although you can create a sharper, stronger sword out of it, it won't do you much of anything insofar as cutting is concerned because there's insufficient weight behind the blade to cut. In order for TE to be Hiero-something technology, it would have to be made of a metal that surpasses the current limitations of our understanding, not just our ability.

Which is not to say that in the context of a world where time travel and the supernatural is possible that it would be unfeasible for TE to be made according to magical/advanced technological rules (I'm reminded of Heinlein's quote that one man's sorcery is another's engineering), but rather that there is no good reason based on our current metallurgical science to believe that such a material is feasible.

In re: fullers

A fuller (erroneously called a blood groove since it does nothing with blood) is usually just hammered in to the blade. It's done to either reduce weight or to change the cross-section shape of the sword (which is useful for various purposes). The reason why I'm skeptical (and I am by no means the expert; I've asked the experts and am waiting on a response) is that the hollow space in the middle of the blade would necessarily take away from the shock-absorbing value of having a mass of softer metal in the middle of the blade. If you get a chance, go handle a longsword or two-hander from a collector, or see if you have a friend that has a functional replica made by a reputable company (e.g., Angus Trim, Arms and Armor, Del Tin, etc.). Watch the sword flex and look closely at the way it's constructed in the middle of the blade. I can take pictures of my Viking sword at home (which has a very wide fuller) and show you. It's a pressed/hammered fuller.

Lane

On Jan 17, 2008, at 12:37 PM, Dan'l Danehy-Oakes wrote:
All true ... But ... Do we know of what metal "Terminus Est" is actually made? Even if Severian calls it steel (which I don't recall offhand), that could be a "translation factor," after all. Who's to say that TE isn't a "galaxy level" piece of technology, some bit of metallurgical alchemy far beyond what we can produce right now?

On Jan 17, 2008 10:20 AM, Lane Haygood <lhaygood at gmail.com> wrote:

I've never heard of an actual mercury channel in a sword. I can ask on a swordsmanship forum I frequent (where several smiths post) to see if it's feasible. From what I understand of sword structure, it's not. You need the center part of the sword to be the strongest part, and that usually means it needs to be softer and more ductile than the surrounding steel. Cutting a big channel out of the middle of it might weaken its structural integrity to the point where it would be useless for cutting.

The idea is that the edges, the parts that need to be sharp, should be harder. When steel hardens, it becomes more brittle. Brittle steel will sharpen and hold an edge. But it's also weak. If you made the

whole sword out of really hard steel it would chip and shatter whenever it made contact with something. So you make the non-edge part of the sword out of softer, more flexible metal so that it will actually absorb shock. But cutting a big channel out of the middle would remove a lot of the shock-absorbing material.

Lane

On Jan 17, 2008, at 12:01 PM, Matthew Keeley wrote:

On Jan 17, 2008 4:58 PM, <brunians at brunians.org> wrote:

That sucker in the wiki article was as long as TE. Couldn't tell if it had a mercury channel, but that kind of thing would be obvious. I have heard of swords with sliding weights also.

So Severian wasn't joking when he said the horizontal stroke was harder than the vertical one....

According to the Wikipedia article, "The Sword of Justice at the Higgins Armory Museum is a fine example of such ceremonial weapons used to designate status and authority." If that's the sword in the picture, that's really neat, as the Higgins is only about fifteen minutes' walk from my house. I'll check it out next time I'm at home (i.e. in six months) and ask about weights and mercury in blades of that type. If anyone would know about that sort of thing, it's the folks at the Higgins. I'll see if I can get some relevant pictures as well.

I recall that Wolfe mentioned basing TE off real swords, so I wouldn't be surprised if the Higgins had something similar.

So... report forthcoming I guess.

-Matt

Matthew Keeley — 17 Jan 2008, 23:03 · in reply to Lane Haygood

I can take pictures of my Viking sword at home (which has a very wide fuller) and show you. It's a pressed/hammered fuller.

I for one would be interested in seeing that. Didn't know we had a sword expert on the list.

And I WILL try and get some Higgins pictures when I get back home in May or June... A wait I know, but as much as I like the Urth list, I generally wouldn't travel 3000 miles for it.

-Matt