

Londoner 401

Chapter 401 Testing - II

Right now, they were standing close to the northern wall, facing towards the northwestern corner of the village walls. The corner was probably a hundred meters away from where they were standing, and a few laborers were busy setting up a dummy target in the shape of a mannequin near the corner, made up of leftover pieces of wood at Darora's workshop, which was being tied up with a rope.

Darora pointed at the target with a scorpion bolt in his hand. "We had thought of using a straw mannequin first, but a single look at this huge bolt made me realize that straw wouldn't stand a chance against it." The carpenter offered the bolt to him. "The fletcher has given us a few samples of the bolts for trial, including a couple of iron-tipped ones as well. Once we confirm that they fit well and work as we want, he'll start making them in bulk."

Kivamus nodded and held up the nearly three feet long bolt in his hand—many times heavier and bigger than the bolts used in a crossbow. It was made of a handcrafted piece of wood, with a few feathers added at the end to give it some stability. The front end tapered to a point, and looked sharp enough to pass through a human being or even an adzee like a hot knife through butter. And this didn't even have an iron tip!

Hudan was examining another such bolt which was iron tipped, before he chuckled and lowered his voice. "Milord, this bolt is something else! With the power that would be needed to launch this bolt, I have no doubt that it can easily pierce through the plate armor of a knight even at a distance. Even the iron-reinforced tower shields used by the swordsmen in the Duke's army at Fort Aragosa wouldn't stand a chance against it!"

Kivamus laughed. "Let's just hope we don't need to use it against them, eh?"

Hudan snorted. "I'd better hope so, since there are thousands of well trained men in that place. We don't have a snowball's chance in hell if we go against them."

Duvas just shook his head hearing their near-treasonous talk while looking at the scorpion from up close. The other guards were talking with the carpenter's apprentices in curiosity, asking things about the scorpion. Before long, the workers making the target ran back to them, leaving the place in front of them completely empty. Of course, the northwestern watchtower was still located there, but that was quite high up, and the people on duty there had been warned not to come down until it was clear.

Kivamus looked at the captain and grinned. "So? Ready to give it a try?"

"Hell yeah!" Hudan raised a fist. He looked at the scorpion and frowned. "But... I don't know how to use it..."

Darora laughed. "Come on, I'll show you. This is the very first trial, so I don't know how well it'll work."

The carpenter explained to the captain where to put the bolt, and how to use a small handle attached to the side of the smaller gear to rotate it. That gear was linked to a larger one, which would move slowly but with a much higher torque, and allowed the operator to pull back the powerful string attached to the torsion springs on both sides of the scorpion. This gear mechanism would allow even a woman to load it easily.

Hudan nodded and began to follow the instructions. He was way too tall to do it while standing—especially since the scorpion was designed to be fitted on top of a parapet of the watchtower, which would increase its height—so he kneeled behind it, and after putting the string over the notch, he began to rotate the first gear. The second gear started rotating as well, which started storing enormous power in the torsion springs on the sides, as the string kept getting pulled back.

Soon, Darora put up a hand. "That's enough. Now, without leaving the gear handle, push this small lever on the side here. Yes, like this. Now this scorpion is loaded. You can leave the gear handle now."

"Oh..." Hudan muttered as he left it. "The handle feels loose now."

"It's meant to be," Darora nodded. "Pushing that last lever switched the holding force from the gears to the nut—this catch. Now all you need to do is put the bolt in its slot and pull the trigger after pointing at the target."

"That I can do." Hudan nodded. He glanced at Kivamus. "Do you want to do the honors?"

Kivamus shook his head. "No, this is for you as the captain. Just make sure you don't miss the target. The other guards are watching, you know?"

Hudan gave a gruff laugh as he put the bolt in its slot and followed Darora's instructions on how to bring the target into his sight by moving the scorpion frame on the pivot it rested on.

Finally, the carpenter made a few final checks and gave a nod. "You can shoot now."

"Let's go, captain!" one of the guards cheered.

"Make us proud, big guy," someone else joked, but a single sideways glance from Hudan was enough to make him cover his words with a cough.

Hudan moved the scorpion's sights to test how it worked, before he slowly brought the target into his sight. He nodded to himself, and then gently squeezed the trigger. The moment the lever attached to the trigger had rotated the nut—which trapped the string holding all the tension—the string was pulled ahead by the torsion springs recovering to their natural position, which made the bolt shoot forward with a twang. Before even a second had passed, there was another louder sound from the front.

Duvas took a step back in surprise from the sound, while Hudan had to put a hand to the ground to maintain his balance, since he had also reflexively moved back from the scorpion. The others were far enough away that at least no one fell down.

"Whoa..." someone exclaimed.

That's when Kivamus looked ahead at where the target was. Or at least, where it was supposed to be. There was nothing left.

More precisely, the human-shaped dummy had splattered into its constituent pieces of wood, which had scattered around. They were too far to see where the bolt had gone though.

"It works!" Darora bellowed.

The other apprentices and the guards cheered loudly, before Kivamus gestured ahead.

"Let's see it from up close," he ordered.

The whole group started jogging to the target, and soon they reached the place where the wooden pieces were scattered. Truthfully, this wasn't a particularly good target, especially with the tied-up branches they had used as a target. One of the apprentices picked up a few broken pieces of wood and showed them to Kivamus.

"Milord, the bolt broke through this wood!"

The small piece of wooden branch which the man was holding had indeed been broken from the impact. Soon one of the guards pointed at the bolt which had fallen some distance away. Kivamus made a gesture, and the guard brought it for his inspection.

He looked at the bolt, and saw that the tapered point at the front had splattered into many parts from the impact on the target. He handed it over to the carpenter.

Darora frowned. "Did the fletcher not make it properly, milord? He's a diligent worker, though..."

Kivamus shook his head. "No, the bolt was made just fine. I saw it before Hudan loaded it." He glanced at the pieces of wood scattered around. "You were right that using a straw target simply wouldn't make any sense with a bolt this big, but wooden branches tied up randomly like this are also too different from a human body, or a wild beast's body for that matter. This wasn't a proper target to simulate the bolt being fired into flesh."

"Then what should we do?" Hudan asked. "It's not like we can tie a human there! The hunters also usually kill and dress the animals they hunt right at the place. We could use one of the manor animals for this but I don't think it's a good idea. Only a cow, a horse, or a nodor would be anything close in size to bandits or other beasts, and we don't have enough of them for killing like this."

Kivamus nodded and thought what they could do about it, remembering the time when he had seen an artificial target being placed for testing bullets of different caliber, back on earth. For a couple of years in his early part of career, he had worked on a government contract given to the company he worked at, to design and make new rifles for a certain branch of the armed forces. Once the guns were ready, their whole team had gone to an undisclosed location—which was probably a black site for field testing—its

location kept secret by blindfolding all the company employees who had gone to see the results and to take notes for further improvements.

At the testing site, he had seen the rifles being tested against different types of targets designed to simulate human bodies. And then the results had been compared by further testing with other guns which were already in use by those people.

Working on that project for so long was one of the main reasons he had become so interested in military aspects of mechanical engineering, which is why he had started reading up things about warfare and the development of guns, starting from the medieval times. However, the relevant point for Tiranat was that at one point during the testing, those people had stacked several parallel plates of some top-secret material, one behind the other, to simulate a proper human target. Of course, testing of a scorpion was far, far different from testing of those advanced rifles, but that testing method was something which could be the solution here too. He didn't really have too many options to select the perfect material to make a good target, but they still had the ever-reliable fedarus wood.

He looked at the carpenter. "Darora. I need planks. More specifically, any leftover planks from the third longhouse construction. They often discard the planks which haven't come out in the proper size or have cracks in them, so we'll make a target from that. Send a few people to get them as well as a few ropes, and we'll make a new target from it. I need at least half a dozen planks. More, if they have them."

Darora immediately gave the order to his apprentices, while Hudan sent a pair of guards to help them pull a cart which would be needed to transport it.

Chapter 402 Testing - III

"Will planks really work as a good target, though?" the majordomo asked. "Wood seems much harder than any animal's body, isn't it?"

"It depends on the thickness. Any planks cut from fedarus wood will have basically the same density. So we're going to stack a few planks behind each other, and then fire the bolts on them. It'll take a few tries to find the exact thickness which will simulate a human body the best, or even an adzee body—although that will need to be far thicker. Either way, I think I can make a good estimate, and we can start from there. Once we've used it against real animals in the future, we can modify the target's thickness accordingly to match it better."

"It would waste a lot of planks, though," Hudan commented. "We'll need to do this testing many times for this one, and for every new scorpion which is made. Wouldn't it be better to just use a log, instead of a stack of planks? It just seems like a waste..."

"Nah." Kivamus shook his head. "Trust me, a plank is much better than a log to simulate human bodies. And anyway, that problem of a shortage of planks is in the past now. With the sawmills now ready and working—" he pointed at a nearby stockpile of crisscrossed logs, "— and with thousands of fedarus logs kept stacked up all around the village, a shortage of planks will never be a problem for us in the future. We can use as many planks as we need for this."

"Then should we use them for target practice for the crossbow women too?" Hudan asked. "A straw target is far too fragile for it. We do have a circular board which they use for that purpose, but if we can use full-sized planks, we can cut them in the shape of a human to let the crossbow users practice to shoot far more accurately."

"Sure. It can't hurt." Kivamus looked at Darora. "Can you send one of the newer apprentices to the manor with a few planks for this? He'll be done in a few hours with a saw."

Darora shrugged. "Fine by me. Two of the apprentices are very new and they can barely do anything properly right now. This will help them learn something new, and cutting the shape of a human from a plank is simple enough that even those idiots can do it."

Kivamus laughed. "Cedoron was also complaining that the new apprentices he had put to make caltrops—those four-pointed old nails, which are as simple as it can be—haven't even been able to make those properly. That's a common problem with craftsmen who are still new. Still, I'm sure your apprentices will do better after learning from experts like you and Layita."

"Eh..." Darora snorted. "I wouldn't be too sure of it. Carpentry is a very intricate task, and not everyone is suited for it. I often have to let go of a new apprentice when I find that they can't do things like I want."

Duvas nodded. "I've had to send such apprentices to other tasks in the past, although Taniok usually takes them on for himself. Darora needs a far more steady hand for his intricate work, while Taniok's building construction doesn't need such accuracy, so he absorbs those apprentices into his teams."

"He sure does!" Darora chuckled. "The old man is getting lazy, I tell ya. He's even stopped training apprentices by himself, saying he doesn't have the time for it. I say he just wants to steal my leftovers."

Kivamus laughed. "Don't worry, it's all for the good of the village anyway. You can even consider this as Taniok accepting your superb carpentry skills, since even those apprentices who are not talented enough for you are still good enough for his tasks."

"Nah." Darora shook his head with a smirk. "He's just getting old and lazy..."

Soon, they saw the guards pulling a cart towards them, with the apprentices walking behind them. It had enough planks stacked on it that both the guards holding a handhold of the cart were straining with sweat.

Once they reached closer, Darora frowned. "One of you should have gone to the manor to bring a horse for this."

"It would've taken too long," the guard replied. "I didn't want to let Lord Kivamus wait here for too long."

The captain snorted. "Don't worry about it, Milord. It's a good workout for them."

Kivamus chuckled. Hudan had started finding newer and newer ways to train the guards even in their off time, whether it was by making them beat sawdust pulp, or letting them pull a cart by hand instead of letting a horse do it.

Then he started explaining how to make the target, starting with three planks. The guards held the planks in place, while the apprentices bound them with a rope, before they looked for some branches to fix in the ground, to tie them to the target to support the stack of planks.

Before long, they had a target ready. It was rectangular—not in the shape of a human—and was just a little less than a handspan in width. From his estimate of the density of fedarus wood, the resistance provided by three planks should be the proper depth to simulate a human body. Although they would need to at least double it if they needed to see how well a scorpion bolt would do against an adzee, if not even more.

Soon, the carpenter hammered a few small but sharp branches in the ground nearby, and tied ropes connecting them to the plank target.

Once the target was standing by itself, Kivamus looked at it and nodded. "This will do just fine."

Hudan glanced at the target and frowned, while the carpenter double-checked to make sure the ropes were tied properly.

"Come on then," Kivamus called out. "Let's try again."

They walked back to the scorpion, and soon Hudan had loaded it again.

"Should I use one of the iron-tipped ones this time?"

Kivamus nodded. "Yeah, let's do that. The planks are quite hard, so an iron tip will be needed for the bolts to be effective. We'll be using only them in real combat anyway. The tapered wood bolts will only be used for practice."

Darora handed over one of the iron-tipped bolts to the captain, who already knew what to do this time. Once he had reloaded and put the bolt in its slot, he gestured to the others to move back. After a nod from Kivamus, he brought the new target into his sights and pulled the trigger. The bolt went forward with another loud twang, but everyone was prepared this time and nobody stumbled from the sudden sound.

Within a moment, there was another louder sound as the bolt hit the target—which was nearly 100 m away.

"Let's check out the results."

They started jogging to the target again, and soon reached the stack of planks. Kivamus reached it after the guards, who were looking at the target in wonder.

"Holy..." someone exclaimed.

"It went all the way through," a guard muttered.

Kivamus saw that the target had a big hole in it—the same size as the diameter of the scorpion bolt—while the bolt had passed through completely. The target was still standing properly though—the bolt had enough momentum in it to entirely pass through it before the target could fall down—just like a bullet would often pass through a hunted animal completely without stopping.

The guards on duty at the nearby watchtower were also watching in curiosity, while Duvas looked like he couldn't believe what had happened, and kept glancing at the scorpion and back.

"Goddess save our enemies," an apprentice mumbled.

"She better not!" Hudan snorted. "Or all this would be pointless."

Kivamus nodded, but he was still looking around for the scorpion bolt, and it was nowhere to be found. That was when one of the guards pointed at the log wall ahead of them.

"Hey! What's that stuck to the wall?"

"Wait, is that the bolt?"

"It is!" Darora exclaimed, as everyone followed him to the wall.

The bolt was indeed stuck into the wall. Its iron tip had entered a palisade log completely, and it was securely held in place like a horizontal flagpost. Darora gave it a few tugs to pull it out but he gave up and looked at the captain.

"It'll need way more muscles than I have. Come on, big man!"

Hudan snorted as he held the bolt and strained to pull it out with his full strength. He still had to wiggle it to remove the bolt, when suddenly he took a step back to balance himself with the bolt finally coming out of the wall. However, its iron tip had remained stuck inside, and only the wooden part was being held by the captain.

Kivamus took the bolt in his hands. Unlike the first test, where the bolt had broken in many places because of the frontal impact to the wooden branches, this time the iron tip had allowed it to pierce through three layers of planks, and it still had enough force left in it to get stuck in the log wall beyond it.

"So much power!" Duvas' eyes were wide.

"This is..." Darora looked at the hole in the log wall, "far beyond what I expected. The torsion springs were so difficult to install, and I knew that they would hold a hell of a lot of power in them, but this..."

"No." Kivamus shook his head. "The scorpion has not outperformed my expectations, but it has certainly met them."