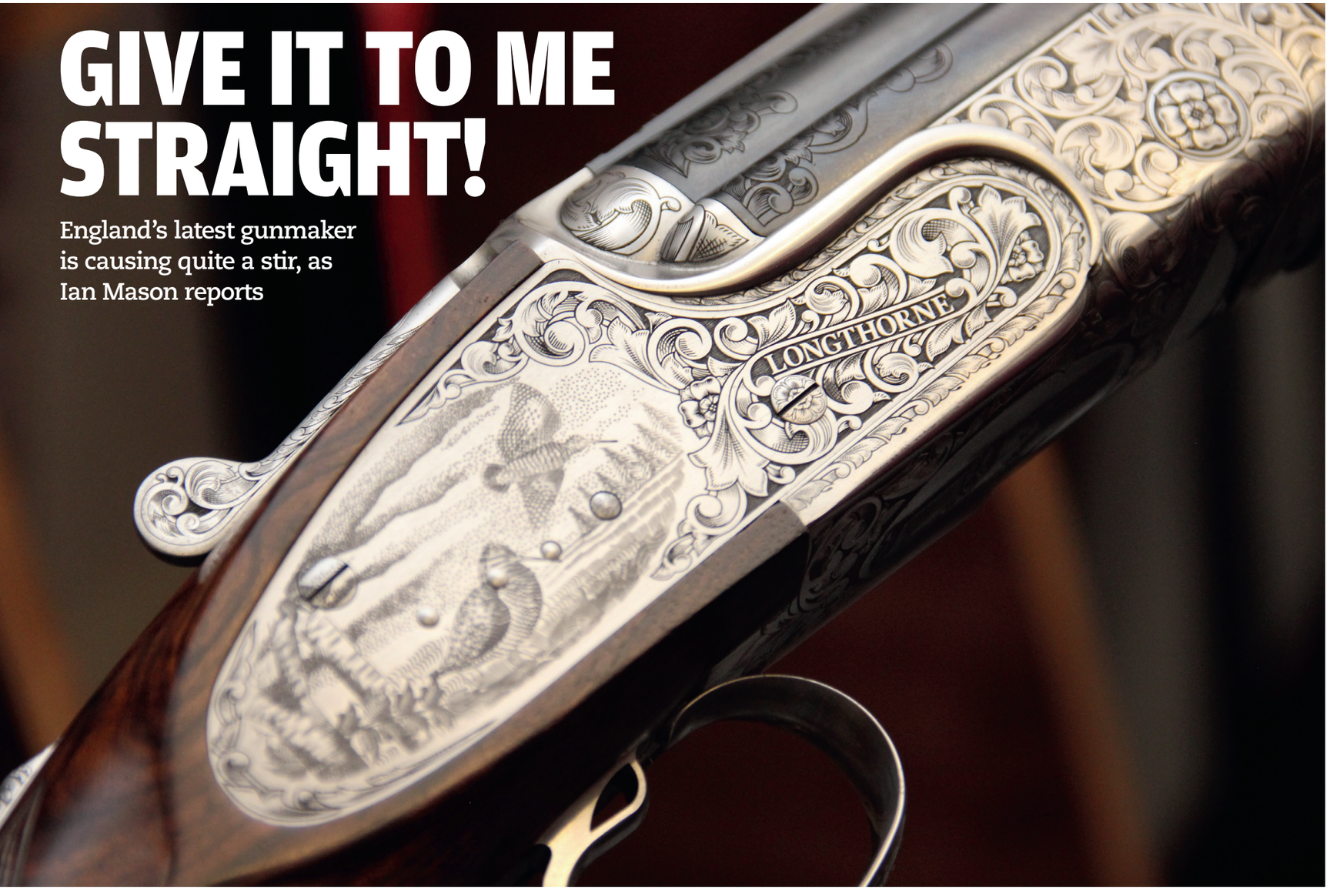
GIVE IT TO ME STRAIGHT!

England's latest gunmaker is causing quite a stir, as Ian Mason reports



Longthorne Guns is a family business. Shown above, James, his wife Elaine, who handles marketing and daughter Chloe, an artist who directs gun engraving

Here's a question: How straight are your shotgun's barrels? The answer, according to engineer and gunmaker James Stewart, is not as straight as you think. "They may also be a bit twisted," he told me with a mischievous grin.

I was talking to James at Longthorne Guns HQ – his new factory in Northampton. On the factory floor, £5million worth of smart machinery was busy turning chunks of steel into his celebrated shotguns. Not bad for a lad who launched his business in a potting shed.

Unique guns

Longthorne Guns claims to be unique for many reasons. Its guns are 100 per cent English-made (none of this importing barrels etc from Italy or Spain and then branding the gun "English"). Furthermore, James says that his barrels are straighter, harder, stronger and lighter than any other manufacturer.

The result is shotguns with exceptional handling characteristics and little felt recoil – even when using monster loads. There's little wonder that Longthorne is causing a stir among gunmakers.

Different approach

The barrels are the heart of the Longthorne story and they really are unique. Most barrels on modern guns are monoblock or chopperlump. In both types, two separate barrel tubes are joined to make the gun. Longthorne takes a different approach. Both barrels, plus lumps and top rib, are machined as one-piece out of a 59lb billet of high specification steel.

Reviewers of Longthorne guns all comment on the lack of felt recoil – but why should making barrels this way reduce recoil? I put the question to James.

> "The result is shotguns with exceptional handling characteristics and little felt recoil"

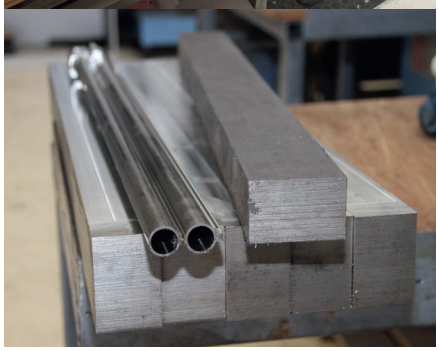
"A lot of felt recoil is actually caused when muzzle flip lifts your head off the gun," he said. "Our ultimate test is putting 50g of no.3 shot through one of our six-and-a half pound guns. Of course there is recoil, but it is straight back through your shoulder – the gun does not try to jump out of your hands. This is down to the straightness and stiffness of the whole gun, particularly the barrels."

Barrel flip

To explain this, James asked me to imagine a barrel with a 90 degree bend. Pull the trigger and the shot would go one way and the barrels the other. "That would be the extreme, but if you get something that is nearly straight, you are still going to feel the movement (barrel flip)," he said.

This is far from hypothetical. James and his team have spent a lot of time measuring barrels from a range of manufacturers, from budget shotguns to some very expensive models.

"Although not visible to the naked eye, many barrels were not straight or were 'corkscrewed' because of the way they had been pulled together and soldered – particularly the bottom barrel when this had been pulled up to the »



On the right a 59lb (27kg) chunk of steel. 56lbs of this are milled, shaved and drilled away to leave a part-finished pair of barrels weighing just 3lbs (1.3kg)

James's party trick – standing on a set of barrels to prove their strength. He has also driven a Range Rover over a set of barrels, without damage

top barrel. I have seen a gun costing £30,000 with as much as a millimetre of corkscrew in the barrels," he said.

In fact James's initial attempts at gunmaking involved manufacturing standard monoblock barrels (where the two barrel tubes are fitted separately into a block of metal comprising the breech ends and lumps) but he was dissatisfied with the results. "We could never get them as accurate as we wanted them to be. A friend got sick of hearing me complain and challenged me to do what I had been threatening and to make both barrels together. That is how we got to where we are today, and it has been some challenge," he said.

In the factory, James handed me what felt like a very light 20-bore. In fact it was an astonishingly light 12-bore. A further surprise came when he told me that Longthorne's barrels are actually thicker than most others, with walls of around 40 thousands of an inch.

Furthermore, whereas many mass-market game guns are spoilt by front heavy barrels, Longthorne barrels are machined so that the front two-thirds are substantially lighter than conventional barrel sets.

"We have pulled as much weight as possible in-between the shooter's hands. This makes our guns feel very well balanced, easy to handle and point," said James Stewart. He added that because no soldering or brazing is needed to join the barrels, they can be heat-hardened without fear of losing that hardness. "Our barrels are about 50 per cent harder than standard barrels. You would really have to smack them over a vice to dent them – I have steel proofed a set with one-and-a-half choke in them." (Production guns can be Magnum steel proofed with full-choke barrels)

The current range of Longthorne Guns can be seen on the company website. All the O/Us and a new side-by-side are true sidelocks, hence an entry price tag of around £13,000 with some bespoke higher-end guns costing more. James plans to launch a boxlock towards the end of this year, at around half the price of current models. The cost is unlikely to fall further, due to the expensive barrel sets. The company also has plans to launch a rifle.

Elaine examines a stock blank from Longthorne's store of Turkish walnut

"If you do something different, you leave your mark behind. Long after we are gone, our guns will still be around. They are different, they are English-made and we think they are something to be proud of," he said.

More information: www.longthorneguns.com **SG**

The celebrated Victorian engineer Sir Joseph Whitworth was an early pioneer of one-piece barrels, seen here fitted to a hammer gun by Edward Paton. Whitworth's 1857 Patent states: "I bore both barrels out of a solid piece of metal leaving the requisite thickness of metal in certain parts to give the necessary rigidity, the object being to make the barrels shoot parallel without making the piece unnecessarily heavy." Available technology limited Whitworth's production, a problem solved by modern machinery. Whereas Whitworth drilled his holes first and then shaped the metal around them, Longthorne first finishes the outside of the barrels and then bores the holes.