

tridge that has seemingly come out of nowhere. Those of you who read my June Rifleman column here in GUNS will recall that I talked about this cartridge which was developed for the military as an experimental long-range sniper round by Lapua of Finland. The cartridge is based on a slightly shortened version of the .416 Rigby case, hence requiring a magnum action like the Heym.

By slightly I mean two-tenths of an inch shorter than the Rigby hull. Case capacity is reduced from about 123 to 107 grains of water (measuring to the base of the neck.) As a basis for comparison, the .340 Weatherby has a capacity of 92.5 grains or some 13 percent less.

The only ammo available is Lapua's own and only in 250-grain full metal jacket — obviously the load they had worked up for martial applications. The ballistic data which appears on the box lists muzzle velocity at 900 meters per second which works out to 2950 fps at 4830 foot pounds of energy. My Oehler 35P, however, showed an average MV of 2785. Considering that Weatherby lists 2850 as the MV for their 250-grain .240 loading (that's in a 26-inch barrel), it would seem that this lot of factory fodder is a little down on power. Considering that the Lapua case has a 13-percent larger boiler room, a nominal MV of around 3000 fps should be attainable.

In light of my getting only one box of ammo with the gun, and
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INSIDE HEYM'S BIG BORE EXPRESS

GUNS Special Projects Editor Tom Turpin is President of Heym, America. We asked him to give us an inside look at the development of the new rifle, and some feedback on his own Heym Express, a .416 Rigby.— Editor

By Tom Turpin • Photos by Mustafa Bilal



For size comparison the parent .416 Rigby case is shown at the far left next to the .338 Lapua. Next is the .340 Weatherby and the .338 Winchester Magnum, neither of which requires a true magnum action.

The fact that practically all the premier rifle makers in the world began their products with a Mauser made action speaks well for the quality of the construction and brilliance of the original design. John Rigby, Westley Richards, Holland & Holland, and other makers of best quality bolt action rifles, all used Peter Paul Mauser's product.

Mauser, of course, ceased production of the superb '98 type actions many years ago. There were hundreds of thousands of military Mausers left over from the big war and many of these were converted into fine sporting rifles.

This works fine for standard (.30-06) length cartridges, as the vast majority of the '98 type Mauser actions are superb actions. However, when it comes to very long cartridges, or, very short ones for that

matter, one must find one of the original short or magnum length actions, turned out by Mauser for the commercial market.

Another alternative is to hire one of a handful of outstanding metal-smiths to either lengthen or shorten a military action, an expensive proposition. A third alternative is to find someone like Fred Wells of Prescott, Arizona, and have him build you an action from scratch. Needless to say, this alternative is also very expensive. But then, so is buying an original Mauser action in either the long or short versions, if one can be found available for sale.

Now there is another option. German rifle manufacturer F.W. Heym is building a magnum length action commercially that is almost a copy of the original Mauser. When I say that, I am referring to the action itself. There are extensive changes



from the old Mauser design in the magazine and all the bottom metal.

About the only *noticeable* changes in the action are to the safety and cocking shroud. The safety system that Heym chose to use is the time-tried and proven three-position sideswing safety, similar to that found on the Model 70 Winchester. This

type of safety has been added to practically all the customized Mauser actions, and for good reason. The original Mauser safety, while certainly functional and positive, just isn't compatible with a scope.

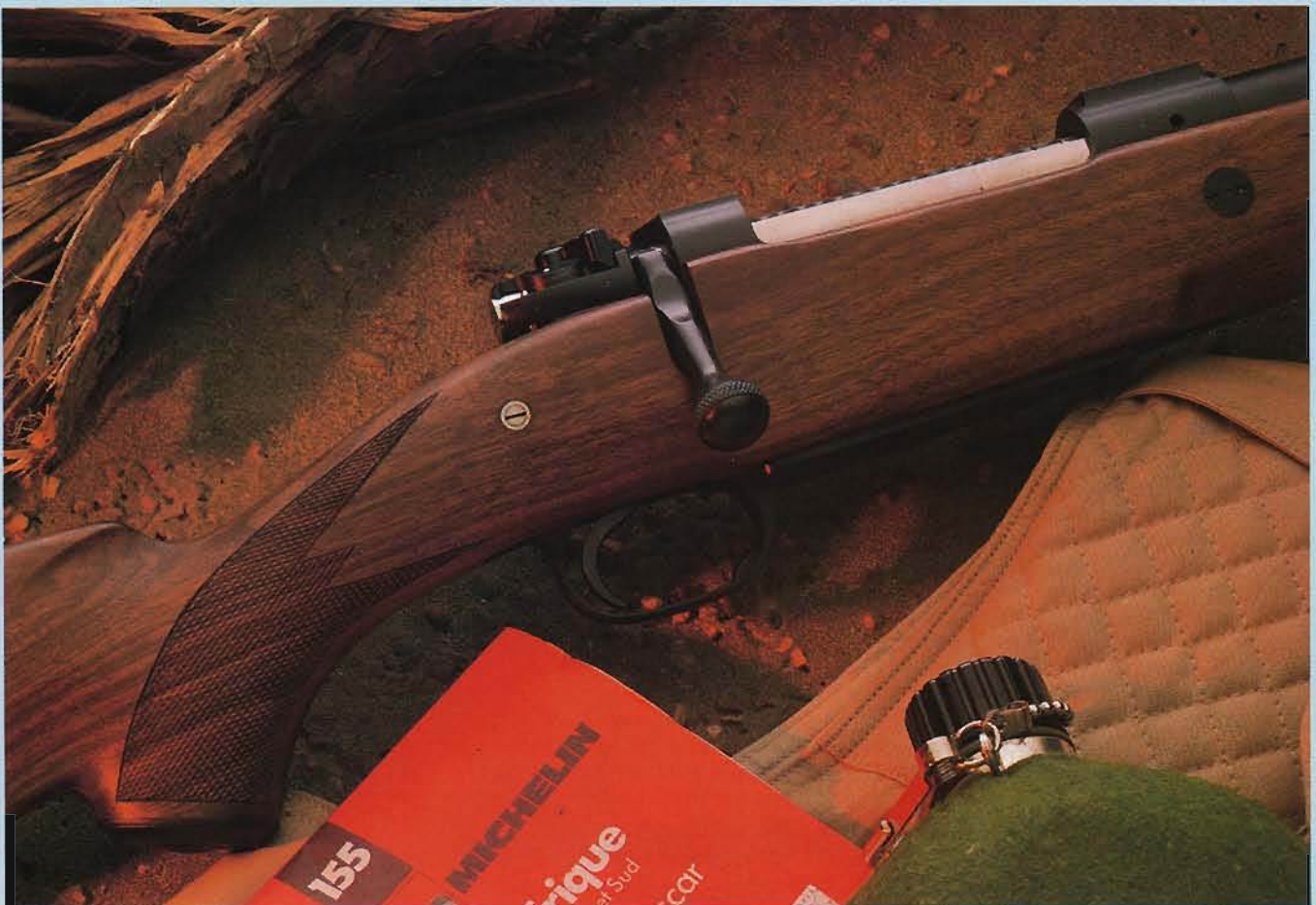
The change in the cocking shroud has nothing to do with function but rather with economics. The shroud

on the Heym Express is very similar to the one on their fine SR-20 action. To machine a shroud identical to the original would add substantial dollars in labor and machine time to the cost of the action. Heym chose, and personally I think it was a wise choice, to go with a less expensive, but more streamlined version of the shroud. The big Heym action is machined from a solid block of steel, just like the original.

The major differences between the new action and the original are found in the magazine and bottom metal. The original Mauser system bedded the stock against a recoil lug machined into the action. Franz Wuerger, the Technical Director of Heym and the designer of the "new" action, had serious reservations about this system.

With the exceptionally long cartridges such as the .416 Rigby and the necessarily long magazine to hold them, the result was a minimal thickness of wood in the stock between the recoil shoulder and the front of the magazine. Franz felt this was insufficient to adequately withstand the recoil of these powerful cartridges. Jon Sundra goes into great detail on this unique design in his nearby article.

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Another change that Franz made was to prevent a common problem found in the original Mauser magazine design. Using the original system, the hunter had to swap out the cartridges that were in the magazine very often. The reason was that if left in the magazine, repeated firings with the heavy recoiling calibers would drive the cartridges in the magazine against the front of the magazine wall, thereby hammering the bullets down into the cartridge case. This had two very negative effects, occurring either singularly, or at the same time.

hammering force on the bullets than with the original system. In addition, Franz milled two steel ridges into the rear of the magazine box, one on either side of the magazine.

When the cartridges are loaded into the magazine, the buffer in the front of the magazine forces the cartridges to the rear, and holds them there under the tension of the spring in the buffer. The ejector cut in each of the cartridges is forced into one or the other of the steel ridges in the magazine, holding each cartridge firmly to the rear of the magazine box. Under the inertia of the recoil, the cartridge is physically held to the rear, preventing the hammering of the bullets into the cartridge cases.

In my limited firing of the rifle, it

will attest to. If it did happen to someone armed with a Heym Express, it would surely be satisfying to know that there were 5 rounds in the magazine, instead of the normal three.

The action is one of the slickest factory actions that I have ever handled, with no roughness or binding anywhere. The bolt functions with all the precision of a Swiss watch. During all the shooting that I have done with the .416 Rigby so far (and at about \$5.00 to \$7.00 per shot it has not been shot all that much!) it has functioned flawlessly. Of course, with its German precision, I expected nothing less than that.

The action features the original double square-bridge configuration. The Heym people tell me that they



The spring-loaded buffer in front of the Heym Express magazine is designed to prevent bullet tips from being deformed by recoil.



The very functional Winchester-style three-position safety and a new distinctive cocking shroud dress up the new Express action.

The first was that the bullet, being driven down into the case, compressed the powder charge. This can and does result in erratic pressures being generated upon firing. Secondly, driving the bullet into the case results in the bullet having to travel further in the chamber before engaging the rifling of the barrel. This can have adverse effects on pressures as well, and can also result in an erratic shot.

Neither of these situations is desirable. One solution to the problem is, of course, to always rotate the cartridges to the top of the magazine, so that they don't remain in the magazine long enough to get hammered with the recoil. Until Heym built the Express action, this was the only solution.

People being people however, they just don't perform that function very often. Franz decided to develop a system where it would not be necessary, thereby eliminating the problem.

His system on the Express involves two things. First, at the front of the magazine, he designed a spring loaded buffer. This buffer performs two functions. It cushions the bullets in the magazine under recoil, giving far less

does work as it is supposed. I could detect no evidence of bullets in the magazine being hammered by the front of the magazine.

About the only criticism of the rifle that I have found deals with its lines. It is not as elegant and trim as I would personally like in such a rifle. The rifle is big, really big. It is also a bit on the clubby side. The reason is that the German engineers built the rifle to hold five, yes I said five, .416 Rigby cartridges in the magazine, plus one in the barrel, giving the rifle a total capacity of six rounds! No other .416 Rigby chambered rifle that I am aware of holds that many cartridges in the magazine.

Now, I am the first to admit that such a magazine capacity could be most advantageous in certain circumstances. A pal of mine got into a situation with a cape buffalo where the bovine, although amply hit, simply wouldn't die! He ended up dodging both buffalo and mopane scrub while trying to stuff more .375 rounds into his rifle, enabling him to finish the situation. He succeeded, but is not too anxious to try it again.

Such situations are indeed rare, but they do happen, as my compadre

are working on a scope mounting system that will lock into milled recesses in the bridges, thereby eliminating the need for bases.

I fired the rifle from the bench at 50 yards, and no further. At that range, the rifle shot better than I could hold it. One inch, three-shot groups were common, using the sights.

I have not had an opportunity as yet to try the big Heym on game. However, I do have an appointment with a cape buffalo in Zambia before long and the Heym will have its baptism then. I have every confidence that, if I do my part, the Express will handle its chore quite nicely.

As far as appearance is concerned, beauty, as someone once said, is in the eye of the beholder. One of the least attractive cars that I have ever seen, the VW Beetle, was also one of the most successful cars ever built. While the Heym Express is not, to my eyes at least, the most aesthetically pleasing rifle that I have ever played with, it is a functional jewel. Just how it works in the mopane scrub, well, you'll just have to wait until my appointment with old M'bogo is over to find out.

