

RIFLES AND AMMUNITIONS FOR ELEPHANT HUNTING

By
Tony Sanchez-Ariño

As a professional elephant hunter in Africa, with 45 years of solid experience in the field and having hunted this huge animal in 23 different countries, from the great rain forests of the Congo to the bush of East Africa and from the Nile swamps to the open plains of Southern Africa, I had the exceptional opportunity to experiment, once and again, with all the calibres of the so called "Elephant Guns" and was able to judge if they lived up to the claims made

for them in the attractive catalogues of their makers, being an interesting fact that the best rifles used today were designed over eighty years ago, and that there has been a very limited improvement in ballistics for the referred elephant guns since that golden age.

In elephant hunting only the round-nose solid bullets should be used. This big and strong animal, with such thick skin, large bones and massive muscles calls for a rein-

forced solid bullet jacket, the one that has a lead-core and is made of steel with a coating of copper to reduce wear in the bore of the barrel. The ideal solid bullet will have a reinforced nose to avoid it breaking up on striking a hard body and strong sides to prevent any distortion which might affect its trajectory.

From some years ago there is also available the so called "Monolithic" bullet, made of solid brass which in theory is perfect but,



Five Tuskers. Original painting by 'Karamojo' Bell.

surprisingly, also can get deformed, with the extra disadvantage of their occasional tendency to lose stability because it is the lead-core which helps the projectile maintain its stability when striking against the great elephant bones and skull.

I've nothing against the monolithic bullets but I prefer the classic one, the traditional steel jacketed bullets used from the last ninety years, particularly the excellent one produced by the Woodleigh Company in

Australia and Trophy Bonded in United States, the best I've used during my 45 years of elephant hunting in Africa.

Experience has proved that any rifle over the .400 bore (10,3 mm), firing a bullet of not less than 400 grains (26 grammes), with a minimum muzzle velocity of 2,000 feet per second (610 metres) yielding a muzzle energy of at least 4,000 ft./lbs. (553 kg./metres) is adequate for use against elephant on the safe side, though

there are some exceptions which we shall discuss later on.

As every hunter knows over the years there have been endless arguments between those favouring small or large calibres, though that question has largely been relegated to the realms of history, apart from the fact that the present regulations all over Africa prohibit the use of small calibres on elephant and any other dangerous game. My old friend John A. Hunter, the famous

professional, summed up the argument best: "You cannot give a man's work to a child..."

In the old days the most famous users of small-bores were "Karamojo" Bell and Stigand, with a handful of others claiming to be of the same school like Barnes and Lyell, though the latter had very little practical experience of elephant hunting despite the numerous books he wrote about this activity. The most well known of this group was "Karamojo" Bell, an exceptionally good shot with a total bag amounting to 1,011 elephant, most of them killed with the 7x57 Mauser (.275 Rigby) and the .318 Westley Richards, though there are the official records showing that he bought from John Rigby & Co., in London, two .416 Rigby rifles and one thousand solid rounds.

The theory that 100 grains bullet weight in the right place is as good as a 1000 grains bullet needs to be taken with a pinch of salt. This opinion might be applicable to animals other than elephant, but this animal with its huge size and strength cannot be the subject of general rules. A bullet might strike exactly the right spot on the outside of an elephant, but because of the obstacles it must encounter and the distance it must travel, it will not necessarily reach its ultimate target. There are a number of other factors which must also be taken into account: The power of the cartridge which fired the bullet; the weight and diameter of the bullet itself; the range at which the shot is fired and the position of the elephant in relation to the hunter. We must also remember that a small calibre solid bullet was not made for this kind of work, and in general does not have the strength necessary to avoid distortion and deviation.

There is no doubt that a 7x57mm (.275) can kill an elephant, specially with the side brain shot and, on an experimental basis, I've killed some few of them with such "toys", but in elephant hunting the fact that a bullet can kill is practically meaningless, it is much more important to know if it can stop a charging elephant in its tracks, or turn him, and this can only be achieved regularly by a big calibre firing a heavy bullet.

If we look at some of the most successful elephant hunters with near or over a thousand heads to their credit, we can see that the vast majority of them used large and powerful rifles:

James Sutherland.....	.577 Nitro.
Peter Pearson577 Nitro.
George Rushby.....	.577 Nitro & .416 Rigby.
John A. Hunter500 Nitro & .505 Gibbs.
"Samaki" Salmon.....	.416 Rigby.
Bill Pridham416 Rigby.
Eric Rundgren416 Rigby.
Tony Sanchez-Arriño465 Nitro.
.....	.416 Rigby & .500 Jeffery.
Bob Foster.....	.470 Nitro.
Harry Manners375 Magnum.

I have checked sixty of the most outstanding elephant hunters between 1900 and 1950, all of whom have shot several hun-

dred elephants, and here is the result with the number of hunters who used each calibre:

.600 Nitro.....	1
.577 Nitro.....	9
.505 Gibbs.....	1
.500 Nitro.....	7
.475 No2 Nitro.....	6
.470 Nitro.....	5
.465 Nitro.....	5
.450 No2 Nitro.....	4
.450 Nitro.....	5
.416 Rigby	7
.404 Jeffery	2
.400 Nitro.....	3
.375 Magnum.....	2
8mm. Lebel.....	1
.333 Jeffery	1
.318 W.R.....	1

As can be seen only five out of the sixty used calibres less than the .400, which I think speaks for itself.

When facing a bull elephant a large calibre bullet with high muzzle energy is needed for stopping power, as I pointed before. A bullet with a heavy impact near the brain of a charging elephant will either knock it down, stop it or cause it to swerve off course, whereas a small bullet, in exactly the same place, may have little or no effect, leaving the hunter in a somewhat unenviable position. With heart and lung shots the larger the bullet diameter and weight, the greater will be the hitting power, and consequently the likelihood of a fatal shot. In fact the use of a powerful large calibre rifle can make up for a poor shot with its extra striking energy, allowing time for a second and more careful shot to finish the matter.

Another eternal debate concerns the pros and cons of double and bolt action rifles and this will be an endless question as long as there is any game to hunt. In general it can be said that if we are going to an area of dense cover and low visibility the double rifle will give the real advantage to have two shots rapidly available without having to lower the weapon for reloading but, in open country, the bolt action rifles will be preferable allowing to shoot more accurately at greater ranges, with time for reloading and firing the four rounds normally in the magazine. If we examine the history of the great elephant hunters we can see that many of them used double barrel rifles but many others preferred the bolt action, so it will be seen that there is no weapon which can be considered as ideal in all circumstances. Each system has its own advantages or disadvantages according to the type of the hunting terrain and the hunters personal ability with one system or another, the human factor is also very important when we arrive to the practical side of the question.

Personally I've used double barrel and bolt action rifles over the last 45 years very successfully, employing one or the other system according the terrain I was going to hunt. Without being too dogmatic about it,

I'd like to say that in the last twenty years, I've been using specially the bolt action rifles in preference to the doubles and, in the most impartial way, there is one point that I'll like to make clear to the future elephant hunter. Of course it is impossible to get off the second shot from a bolt action rifle as quickly as from a double, this is quite obvious, but in real life, even when hard-pressed by a charging elephant, those split-second-snap-shots, so beloved of so many authors are simply non-existent.

If the hunter has the minimum practical experience in the use of his bolt action rifle he will, in the vast majority of cases, be able to fire two or three shots without difficulty. I'm afraid those authors who experience miraculous escapes and have close shaves by the score only show themselves up as men of scant experience and skill, since such adventures usually result from mistakes on the part of the hunter. There is no doubt that complications do occasionally arise, and usually when least expected, and it is at these times that the hunter will need all his experience and a cool head in order to get out of the situation. However, I should like to make it quite clear that, contrary to the claims of some sensational authors, those situations are definitely the very rare exception rather than the pretended rule.

Thanks to some firms in Europe and the United States it is possible to obtain again all the traditional cartridges for the calibres designated as "elephant guns", both double and bolt action rifles. Parallel to them there are also a list of "wildcats" on offer, each one more eccentric than the other. With all the classic big bore cartridges loaded there is no point at all for the future hunter to use a "wildcat" for several reasons: The ammunitions are difficult to find because their production is normally very limited, being loaded by one or two persons only; the ballistics are inferior to the pretended one when you check it with the chronograph, and normally they have a very high chamber pressure which can be very dangerous in the African heat, as it increases after some hours in the sun with the serious risk of a case sticking in the chamber after the shot, or even "freezing" bolts, creating a "hot" situation in front of an angry elephant.

For many people super-high velocity and dramatic energy is essential, but I do not agree on it. There are limits to the killing power required because you can kill the elephant only one time, not twice. This animal is only a living creature, not an armoured car, and its hunting is a magnificent sporting activity, not a war where it must be exterminated by any means.

In elephant hunting penetration is imperative, in order to reach the deadly points from any angle, followed by stopping power. With these two points in mind there is a selection of recommended calibres for the future hunter planning to follow the spoor of the greatest trophy in the world,

P.O. Box 525.
Nairobi. Kenya
Jan 17. 1949.

Messrs G. E. Lewis & Sons
Gun makers
37/33 Lower Lonsdale St.
Birmingham. England
Dear Mr. Lewis.

Many thanks for your letters and good wishes

of 3rd & 4th January.

I have mailed a $\text{£}3.500$ Jeffery Rifle No. 16497 to Messrs
Nairobi to be posted to you for complete overhaul & reconditioning
You will value it at $\text{£}30-$
Probably in the annals of big game hunting. This rifle
stands alone, having accounted for more than 600 Shebhu
and at least 900 Ruines etc etc. — as I live on hope
& expedited passages here, though it is best to get this rifle by
at the earliest and save me the trouble of carrying it with me.
This weapon requires complete overhauling, rebluing, cleaning,
new recoil pad fitted and probably a new fore-sight —
I favour the size of bead as at present being picked up instantly
indeed I use this rifle as a shot gun and it has saved
me in many tight places.

Re. Bell's book. I have a copy of his "Wanderings of an Elephant
Hunter" — which is indeed an interesting volume —
The Karamaji country behind Mount Elgon is very open
country — grass and swamp land and consequently with
wind against the elephants — they were easily approached
and "fine" shooting could be done by small bore rifles —
Personally admitting this — I am quite certain that either the
rifle or the elephant is the cruellest weapons to use on elephants
Elephants — (wise beasts) ever out to protect themselves altered
their habits since the dark ages — as recent as 1900.
and gave up the open country, seeking refuge in forested thickets,
There — only the heavy double is the satisfactory weapon to use if
one wishes to continue hunting —
All the very best to you

Yours very sincerely,
J.A. Hunter



A letter from J.A. Hunter to G.E. Lewis outlining some of Hunter's thoughts on suitable rifle calibres for elephant and rhino. Reproduced courtesy of Mark Rhodes.

The African Elephant, starting with the bolt action rifles and their position in 1997:

BOLT ACTION RIFLES

The .404 Jeffery:

This calibre, introduced by the famous British rifle and ammunitions maker, has been always very popular and during the colonial days it was one of the favourites used by many Game Departments on "Elephant Control" (The Sudan, Belgian Congo, Kenya, Uganda, Tanganyika, Northern Rhodesia, Nyasaland, etc.). In Uganda alone over thirty thousand elephant were shot on control with the .404 Jeffery between 1920 and 1940.

Originally its 400 grains bullet (26 grammes), loaded in the old British Kynoch cartridges had a muzzle velocity of 2,125 feet per second (648 metres) and a muzzle energy of 4,020 ft./lbs. (556 kg./metres), but later on its ballistic was greatly improved, specially by the German firm "RWS", increasing the muzzle velocity to 2,330 ft. per second (710 metres) and the muzzle energy to 4,840 ft./lbs. (669 kg./metres).

If the improved ammunitions is used in rifles originally regulated with the old Kynoch they will need to be re-sighted due to the higher velocity and the different combustion curves of the new gunpowders. The .404 Jeffery is still manufactured by all the famous gunmakers in Europe and a few in the United States, being a safe and reliable calibre to use against elephant. It was the favourite bolt action rifle of the great professional elephant hunter "Mickey" Norton, who shot almost a thousand heads with his .404 out of a total of around two thousand in his life.

The .416 Rigby.

Designed by John Rigby in 1909 and marketed three years later after improvements and testings in the field, it has been used by professional and sporting hunters since then, being generally regarded as the perfect magazine rifle for hunting elephant due to its terrific penetration.

The 410 grains bullet (26.5 grammes) with a muzzle velocity of 2,371 ft. per second (723 metres) and a muzzle energy of 5,100 ft./lbs. (705 kg./metres), has the ideal length-to-diameter proportion which gives to the .416 Rigby the greatest penetration of all the big bores over .400, reaching the elephant brain, heart or lungs from any angle of shooting, something of paramount importance as I pointed out before.

The legendary "Samaki" Salmon, who was for many years in charge of the elephant control in Uganda, shot over 4,000 elephant using two .416 Rigby rifles. While he used one his African gunbearer reloaded the other, so that he always had one ready to hand, with the record of having shot seventy in one weekend, with twelve of those with twelve shots in less than two minutes. My old friend Bill Pridham, also in Uganda, shot about 2,000 elephant on control work mainly with his .416 Rigby.

Another dear friend of mine, Eric Rungren, shot near 800 elephant in Kenya and Tanganyika with his .416 Rigby, Cormon around 500 in French Equatorial Africa and Marcus Daly over 600. Many other famous names could be added to the list of users of the .416 Rigby, among them my friends David Blunt, John A. Hunter, John Taylor, George Rushby, John Lawrence, Anthony Dyer, Bob Foster and Harry Selby. Personally I've shot with my .416 Rigby over 400 elephant, plus many hundreds of buffalo and an important number of lions and rhino.

Today, after 85 years, the .416 Rigby's reputation grows ever stronger. It is manufactured by all the famous European gunmakers and quite a few in the United States, where the well known ammunition manufacturers "Federal" produce its cartridges in their selected "Safari Line".

With its superb ballistics for elephant hunting and the fact that its ammunitions can be bought over the counter, I can recommend very strongly the .416 Rigby backed also by my personal experience with it during 45 consecutive years on "the ivory path".

The .416 Remington.

This is the American "brother" of the British .416 Rigby, introduced by Remington some years ago. Its ballistic are, more or less, a copy of the veteran .416 Rigby, with a bullet of 400 grains (26 grammes), a muzzle velocity of 2,400 ft. per second (732

metres) and muzzle energy of 5,115 ft./lbs. (707 kg./metres), all combined in an straight case of the 8mm Remington Magnum which allow this cartridge to be used on standard length bolt actions.

I've only a moderate experience with the .416 Remington, I shot seven elephant and eleven buffalo, plus one lion and a few antelopes for the "pot", all them in the most satisfactory way. Several professional hunter friends of mine are using the .416 Remington to back up their clients on safari and are very happy with the practical results.

Is no doubt that this calibre is going to become very popular among the big game hunters and is already offered by most of the gunmakers as well as Remington. Winchester is also manufacturing rifles in the .416 Remington in their famous Model 70 with the Pre-64 action, an excellent weapon at moderate price. The .416 Remington can be recommended to the future elephant hunter without any problem.

The .450 Rigby.

This is the "youngest" of the big calibres commercially produced, introduced by John Rigby & Co., of London only some few years ago. I've been honoured by Rigby to carry on the tests against elephant with this calibre and, I'm pleased to confirm, the performance of the new .450 Rigby Rimless was excellent having shot five elephants from different angles, all of



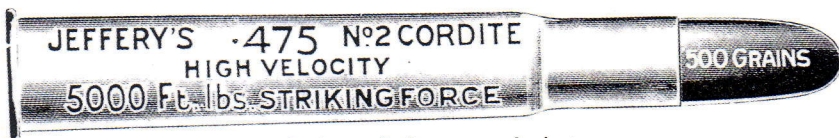
This animal is only a living creature... its hunting is a magnificent sporting activity.

RIFLES AND CARTRIDGES

FOR BIG GAME SHOOTING.

.475 No. 2, .470 & .450 No. 2 CORDITE EXPRESS CARTRIDGES.

The .475 No. 2, .470 and .450 No. 2 Double Cordite Rifles are intended chiefly for use against Elephant, Bison, and other large and dangerous game in the jungle. The smashing power of these weapons is, of course, superior to the .400 Jeffery at short ranges, and consequently it would be more certain of dropping an animal and preventing a charge. To reduce the recoil we usually make the weight 11 lbs. With rifles of less weight the recoil is very severe, and prevents the accurate placing of the second shot.

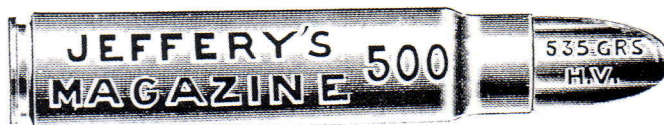


The .475 No. 2, .470 and .450 No. 2 bore double rifle cartridges all give a striking energy in the region of 5,000 foot pounds. We usually fit these rifles with 24in. barrels; this enables us to get the majority of the weight of the rifle between the hands, which means that we can produce a very well balanced weapon that can easily be handled for close range work in the jungle.

We always keep a stock of .475 No. 2 and .470 bore double rifles, but the .450 bore rifles we only build to order as they are prohibited by the Indian Government, although they are still popular in Africa.

JEFFERY'S NEW .500 BORE MAGAZINE RIFLE.

We have recently made up a New Pattern Magazine Rifle, to take the new .500-bore Rimless Cartridge. This cartridge is one of the most wonderful cartridges that has ever been introduced. The bullet weight is 535 grains, and by means of large powder charge the bullet obtains the exceptional velocity of 2,400 feet per second. The corresponding muzzle energy obtained is 6,800 foot pounds. This energy is practically equal to that given by the well-known .577-bore cordite express rifle cartridge. This rifle should meet the requirements of the sportsman who prefers a magazine rifle to a double, but who has not up to the present been able to obtain a magazine weapon of sufficient power. Full particulars of this rifle will be found on Page 43.



THE JEFFERY .600 BORE CORDITE CARTRIDGE.

The .600 is the perfect weapon for Jungle or Elephant Shooting, as anything hit with its 900 grain bullet is usually knocked over on the spot. Much more accurate shooting can be made with this rifle than with a 4 or 8-bore, and there is no smoke to prevent a sportsman from getting in a second shot quickly if required.



TYPES OF BULLETS FOR JEFFERY RIFLES.



POINTED EXPANDING.



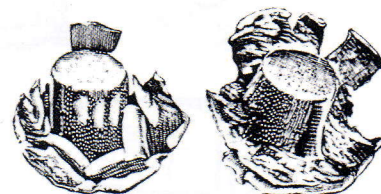
3
SOFT NOSE.



4
SOLID



SOFT NOSE SPLIT.



JEFFERY SPLIT BULLET EXTRACTED FROM BUCK.

Solid bullets should be used where extreme penetration is required.

Soft-nosed bullets penetration combined with expansion.

Soft-nosed split and copper pointed expanding bullets are suitable for soft skinned animals.

them huge bulls, without any problem. I also took the chance to shoot other dangerous animals, like six buffalo and two lions, having done the job in the most satisfactory way. I found the .450 Rigby a very handy gun easy to shoot, with a light recoil for such a big calibre.

With a bullet weight of 480 grains (31 grammes), muzzle velocity of 2378 ft. per second (725 metres) and muzzle energy of 6288 ft./lbs. (869 kg./metres), it is a powerful cartridge perfect for elephant hunting and any other dangerous game, filling up the space between the .416 Rigby and the .500 Jeffery. In the two first years after its introduction Rigby has manufactured

25 rifles in the .450 Rigby Rimless on special orders, which means this calibre is becoming popular all over Africa.

The .458 Winchester.

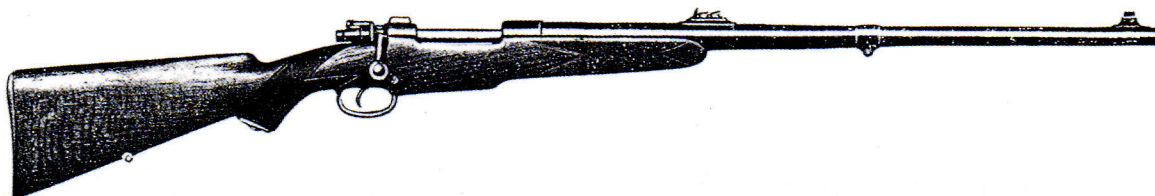
This calibre was at a time quite popular, but not any more. As far as I am concerned I openly dislike it for elephant hunting, an opinion shared by many seasoned hunters. It is the only cartridge which has let me down once and again with factory ammunitions, which tends to be erratic and unreliable too often and the reason of some quite unfortunate accidents.

If you check the pretended ballistics with

the chronograph you will see that the muzzle velocity is, quite often, well below the official 2040 ft. per second, with the consequent reduction of energy. The penetration can be very poor in general, even with the correct placement of the shot, a factor SO IMPORTANT in elephant hunting...

It is a well known fact that the .458 Winchester has lost a lot of its popularity which, maybe was due only to the fact that after Kynoch gave up the production of all the classic British calibres, the .458 was the only big bore available over the counter. Later on, however, with the whole list of heavy calibres loaded again,

The "Gibbs" .505 Big Game Magazine Rifle.



This rifle has proved a great success, and has to its credit some extraordinary achievements against Elephant and other big game in many parts of the world, including Kenya, Tanganvika, Nyasaland, Rhodesia, Angola, Portugese East Africa, India and Ceylon.

Reference to the ballistics will show it to be by far

THE MOST POWERFUL MAGAZINE RIFLE IN THE WORLD.

It is designed to take four cartridges (three in the magazine and one in the chamber).

The backsight on the Standard model has a standard and two spring leaves for 100, 200 and 300 yards, and a bead front sight is fitted, but any other form of sighting can be supplied to suit sportmen's requirements.

Price of Rifle including anti-recoil heelplate and spare front sight £40 0 0

The Gibbs .505 Cartridge.



(Actual Size.)



Solid Hard Steel covered bullet giving great penetration.



Soft nose expanding bullet for heavy soft-skinned beasts.



Soft nose and split expanding bullet for medium sized soft-skinned beasts.

Powder Charge 90 grains.

Muzzle Velocity 2,350 ft. sec.

Price of Cartridges

£4 4 0 per 100.

Weight of Bullet 525 grains.

Striking Energy 6,431 ft. lbs.

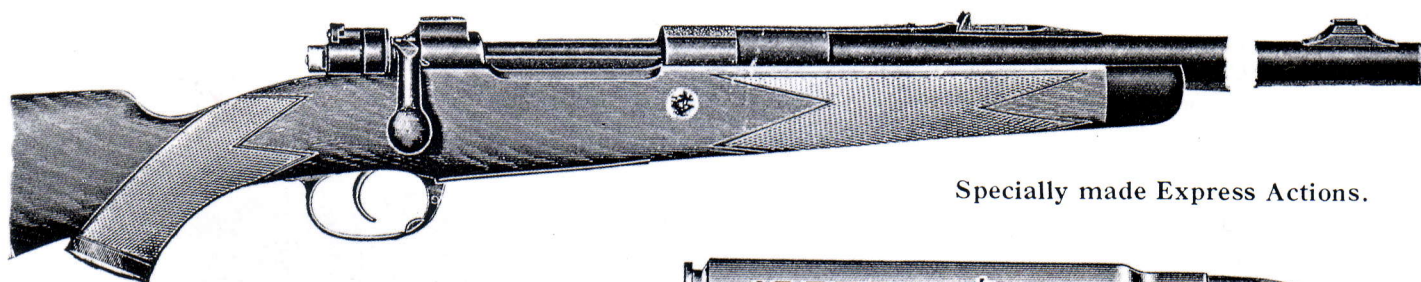
JEFFERY'S

·500 MAGAZINE RIFLE

A 4-SHOT WEAPON

We claim this weapon to be the most powerful and best handling Heavy Magazine Rifle yet introduced, the energy being almost that of a Double .577 Cordite Express Rifle.

Velocity, 2400 ft. secs. Muzzle Energy, 6800 ft. lbs. Weight of Bullet, 535 grains.



Specially made Express Actions.

Weight of Rifle 10½ lbs.



Specially designed Mauser Magazine Action, holding 3 Cartridges in the Magazine and 1 in the Chamber, thus enabling 4 shots to be fired without re-charging.

No. 1 Model.—24in. round steel barrel with short matted rib, standard and two-leaf backsight to 300 yards, bead foresight, pistol grip stock of selected straight grain walnut, nicely chequered, rubber anti-recoil pad. Eyes for sling. Most carefully shot and regulated. Weight about 10½ lbs. Price **£40**

No. 2 Model.—24in. round steel barrel, with short matted rib, standard and two-spring-leaf backsight to 300 yards, bead foresight, pistol grip stock of selected walnut, nicely chequered, trap in pistol grip containing spare foresight, rubber anti-recoil pad. Eyes for sling. The action is highly scroll-engraved, and the whole Rifle specially finished. Weight about 10½ lbs. Price **£45**

During the last few years we have had many enquiries from sportsmen for a heavy magazine rifle to equal or surpass the energy of double rifles of the .470-bore class. We have, therefore, decided to build rifles of the magazine type to take the .500-bore rimless cartridge. In our private tests the results obtained with this rifle have surpassed our utmost expectations. The striking energy of the bullet exceeds that of any rifle at present being made, with the exception of the .577 and .600 bore rifles.

There are two classes of sportsmen to whom we think this rifle will make a great appeal: Firstly, the sportsman who does not feel inclined to pay the comparatively high price that gunmakers have to charge for a reliable double rifle; secondly, the sportsman who prefers a magazine rifle to a double rifle at all times, but who up to the present has been unable to obtain a magazine rifle of sufficient power for his purpose.

his reputation has been eclipsed. Otherwise there wouldn't have been any reason to introduce new calibres, like the .416 Remington designed, obviously, to take its place.

I'm sorry to take up a position against the .458 Winchester, but I'm only guided by the need to help the future elephant hunter to select the best calibres for this particular activity. There is no question that the factory ammunition with 500 grains solid bullet (32 grammes) and 510 grains soft (32.7 grammes), with a muzzle velocity of 2040 ft. per second (622 metres) and muzzle energy of 4712 ft./lbs. (651 kg./metres) will be adequate for the rest of the game but, against elephant under the circumstance, not at all, unfortunately, because apart from its poor penetration, it lacks also the required stopping power to face a charging bull elephant with safety.

The .500 Jeffery.

Created in Germany in 1926 as the 12.7x70mm. Schüller and adopted by Jeffery from 1927 as his big bore magazine rifle, this calibre proved to be the greatest of "stoppers", ideal for elephant hunting under any circumstance in any kind of terrain, really magnificent.

I started using full time the .500 Jeffery in 1986, when its ammunition was available again. In these eleven years I've shot a little over eighty elephants in the safest and most satisfactory way I've experienced in my whole hunting life.

Its bullet of 535 grains (34.7 grammes) with a muzzle velocity of 2400 ft. per second (732 metres) gives a muzzle energy of 6800 ft./lbs. (940 kg./metres), a real "anti-tank gun" against elephant, together with a very important point. Its maximum chamber pressure, in such a powerful cartridge, is as low as 46.411 pounds per square inch, making the .500 Jeffery a very safe load to be used in tropical countries with hot climates.

For the real elephant hunting specialist the .500 Jeffery is without a doubt the "right tool". I've a great confidence in this calibre and I only regret that I had not one during my "golden days" of elephant hunting, recommending it very highly. Fortunately the glorious .500 Jeffery is alive again, its ammunition loaded on a regular commercial basis and the rifles manufactured by several well known gun-makers.

The .505 Gibbs.

Created by the famous gunsmith George Gibbs of Bristol, with a performance quite close to the .500 Jeffery, the .505 is also an excellent cartridge to be used against all kinds of dangerous game in general and elephant in particular.

Looking at my records I note that I've shot thirty bull elephants with my .505 Gibbs, nearly all them with one shot. It was the favourite bolt action rifle of my friend John A. Hunter for elephant con-



The author in the Sudan with four tusks well over 100 lbs each.



In the North Frontier district of Kenya with a fine bull.

trol, when he was reducing their numbers at the Kenya Game Department service, having shot on one occasion twelve of them from the same herd when facing an stampede.

Its bullet of 525 grains (34 grammes) has a muzzle velocity of 2350 ft. per second (716 metres) with a muzzle energy of 6180 ft./lbs. (854 kg./metres), which gives to the .505 Gibbs the credit as one of the best "elephant guns" in existence, and the one I can recommend very strongly to be used under any circumstance all over the elephant habitat.

Just to put an end to the bolt action rifles I'd like to clarify one point. The maximum muzzle velocity for the cartridges used against elephant must be 2400 ft. per second (732 metres), not more. Up to this figure the bullet will keep always its stability and trajectory when striking against the biggest bones, but more velocity can

be negative because the bullet, at the short range that the elephants are to be shot, with too much velocity has the serious risk to be deflected when meeting a strong body in its trajectory, missing the target.

DOUBLE BARREL RIFLES OR "EXPRESS".

There is a wide selection of double barrel rifles to be used on elephant hunting, from the .400 Nitro to the .700 Nitro, but the most popular, by far, are the .465 Nitro, .470 Nitro and .500 3" Nitro, all them extremely popular all over Africa.

The .465 Nitro.

For many years I've used a wonderful .465 Nitro Holland & Holland Royal without a single failure, having shot some hundreds of elephants and buffalo with it. The .465 is referred as the .500/.465, which means that the case is a .500 bore necked down to the .465 calibre.

The .465 Nitro has a bullet of 480 grains (31 grammes) with a muzzle velocity of 2150 ft. per second (655 metres) and 4930 ft./lbs. muzzle energy (681 kg./metres), being a very fine elephant cartridge. On one occasion I shot 11 elephant with 16 rounds and, in another, 9 bulls with 14 bullets, which I think speaks for itself.

This calibre was developed by the famous London firm of Holland & Holland and, with its very low chamber pressure, was always perfect to be used in hot climates, becoming extremely popular in India. It was John Taylor's favourite double barrel rifle for elephant and the one favoured by my friend the late Tony Henley, once a great elephant hunter in Uganda and Kenya.

The .470 Nitro.

Without any doubt this calibre is the most popular double barrel rifle in the whole of Africa at the present moment, with a great reputation well deserved thanks to its killing power.

The .470 has been used by some of the most successful elephant hunters. My friend, the late Bob Foster, shot 991 elephant in Kenya and Tanganyika on licence and on control work using a pair of double .470 Nitro made by Rigby. In his life Bob shot 39 hundred pounder elephants on his own licence, plus another thirty with clients, which makes a total of 69 bulls

with tusks over 100 p pounds each.

Firing a bullet of 500 grains (32 grammes) at 2125 ft. per second of muzzle velocity (648 metres), with 5030 ft./lbs. (695 kg./metres) it is a magnificent calibre for elephant hunting, its ammunition being manufactured on commercial basis by several European firms and in United States, specially by the well known Federal in the "Safari Line".

The .500 3" Nitro.

With a heavier bullet of 570 grains (36 grammes) the .500 Nitro with a three inch case is more powerful than the .465 and .470, being a great killer.

As far as my personal experience goes with the .500 Nitro I've only praises for it. This calibre was the favourite of the famous John A. Hunter, who shot many hundreds of elephant, rhino and buffalo with it in preference to any other. In the far off "golden days" of ivory hunting the .500 Nitro was one of the most popular and respected calibre among the great elephant hunters.

With a 570 grains bullet (36 grammes), muzzle velocity of 2125 ft. per second (648 metres) and muzzle energy of 5730 ft./lbs. (792 kg./metres), the veteran .500 Nitro is a great "stopper" and highly recommended as an "elephant gun" under any circumstance under the African sun.

The three double rifles referred to above

are perfect for elephant hunting and also easy to handle by the average hunter, which is of paramount importance. Bigger calibres are very heavy and not so easy to shoot properly, specially by those with limited experience in this field. To be over gunned is also a serious mistake.

As I pointed at the beginning of these notes I've experimented against elephant with every calibre between the .375 H&H Magnum and the .577 Nitro, and after 45 years following the "ivory path" and 1,246 elephant to my credit my favourite calibres have become the following:

1. The .416 Rigby with long Mauser-Magnum action made by John Rigby & Co. in London.
2. The double barrel .465 Nitro made by Holland & Holland of London in the Royal Model with automatic ejectors.
3. The .500 Jeffery specially manufactured for me by Harald Wolf Master-gunmakers in Belgium, fitted with his special reinforced Mauser-Magnum action.

As can be seen the potential future elephant hunter has a wide selection of calibres to choose from, both bolt action and double barrel according their personal preferences but, always keep in mind, despite the system selected, that the best "elephant gun" is the one that puts the bullet in the right place! □

.465-Bore Express Big Game Rifle.

THE "INDIA"

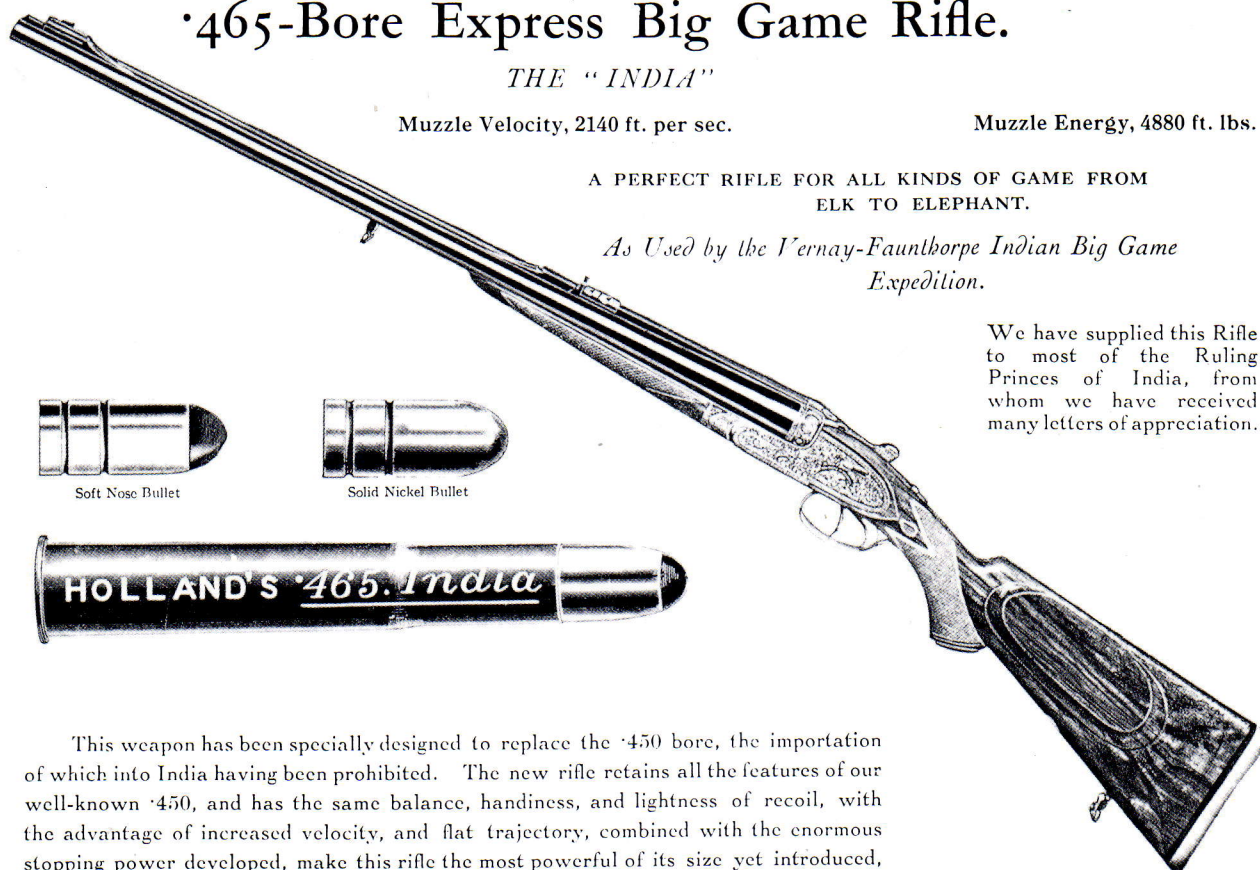
Muzzle Velocity, 2140 ft. per sec.

Muzzle Energy, 4880 ft. lbs.

A PERFECT RIFLE FOR ALL KINDS OF GAME FROM
ELK TO ELEPHANT.

*As Used by the Vernay-Fauntorpe Indian Big Game
Expedition.*

We have supplied this Rifle to most of the Ruling Princes of India, from whom we have received many letters of appreciation.



This weapon has been specially designed to replace the .450 bore, the importation of which into India having been prohibited. The new rifle retains all the features of our well-known .450, and has the same balance, handiness, and lightness of recoil, with the advantage of increased velocity, and flat trajectory, combined with the enormous stopping power developed, make this rifle the most powerful of its size yet introduced, and one we have every confidence in recommending.