

Munición Devel

The Devel ammunition the firmness of the fragility. A tribute to Charles Kelsey

by Javier Abedini

The radially dynamic bullet

For many years, when they began to leave the first ends the frangibles denominated ones, (different compressed dusts), in its different variants, there was a person that glimpsed that it could obtain something more than any other, and dedicated all their life, until their last moment, to the investigation and development of this type of ends, obtaining the plus outpost the frangible ammunition of all the well-known ones, the Devel ammunition.



There is something characterizes the great people and are his beliefs and their ideals, many have pawned a whole life to develop some instrument or element in which they overturned all his hopes, in best of the cases some managed to see their results and of enjoying the obtained benefits, others had to be resigned and to leave all the obtained one by different reasons, being resigned itself to leave all their dreams, but that worse than when one manages it to make reality its dreams, and do not manage to see the results, more worse still than the forgetfulness seizes of our life and we happen inadvertent before all, by that reason I have decided to make this brief tribute to Charlie Kelsey.

Until same Tom Burczynski (to who I must great part to him of the information of the present report), talking about to him it says in an article for the well-known "The Gun Zone", "... Charlie Kelsey was a talented inventor...", in a while inclusively it was collaborating gratuitously with Kelsey, in the part of development, says on the matter: "... I agreed, with him who let to me attend to him, gratuitously, he is that he was found out that he desperately tried to conserve his limited bottoms of the R&D (Investigation and Development)..."

As a friend says to Jorge mine, "... to go well to the grain...", the subject is thus, after three years and means of development, and many prototypes came to the light the first bullet denominated by their creator like "the radially dynamic bullet", call also "Devel", were a dust alloy of copper and compressed tin, both metals in amounts balanced for an optimal performance.

The basic principles to use were the following ones:

- 1°) was necessary to create the ammunition that is not of hollowed end.
- 2°) the effects of the ammunition at the time of the hydrodynamic shock had to be the same generate a displacement of the energy in all the senses (similar to anyone of mentioned special-purpose ammunitions until this moment).
- 3°) the great problem of those years (principles of 90), was the separation of the disguised one with the nucleus, (lost of mass, erratic trajectory, etc), which with this ammunition was eradicated such problem.
- 4°) had to behave like armor-piercing ammunition before solid targets and expansive before soft, simultaneously to compliment with the requirements imposed by the FBI.
- 5°) must have a dual intention ".....", to be used for training and provided daily use to a force.
- 6°) must have qualities of nonpolluting, that is free of lead.
- 7°) had to present/display a profile that it correctly feeds in any automatic weapon or semiautomatic.
- 8°) did not have to cross to a person, all the energy had to be exhausted in the target.
- 9°) did not have to cross the bullet-proof vests level II (norms N.I.J.), that is looked for especially the performance.

By its physical aspect and seeing it from above, subjectively it makes an impression like an asterisk of five ends.

The prototypes in the calibers were several that were designed, single is known that commercially 9 mm were those of the caliber, Luger; 40 S&W, 45 the ACP, (in which it has six fins), and one version 12/70 are those that prevailed more.



Image of 9 mm Luger Devel



Image of .45 ACP Devel

The "Radially Dynamic Bullet", uses 5 fins with a deep cavity and wide, with a bent form, in the impact with an animal (as a example), the fins produce cut in weaves facilitating their entrance, and the force of the incoming material in the areas of the fins is driven radially far from the projectile, at a very high speed and with enough force, with the capacity to create substantial an inner damage.

Re radial address of the fluídico material (woven of the muscle, weave of the organs, fragments of the bone, etc) can create bleeding severe and a fast incapacitation in as soon as inches of penetration, (eye, I said incapacitation of an individual not to confuse with death).

After several inches of penetration, the bullet loses stability and begins to give volteretas and more even creates a damage, in the same way it makes possible the cause that the projectile does not cross to the person, and does not cause possible damages to third innocents, so as it happens with the disguised ammunition or the call mistakes, paradoxicalally and ironically "humanitarian bullet".



Fragmentation of 9mm Luger Devel

The bullet of Devel can penetrate a glass of a windshield and soon in its trajectory to enter between 9 and 10 inches in ballistic gelatin, retaining 65% of the weight of the bullet. Single it will penetrate two bullet-proof thirds of a vest of Level II (norms N.I.J.), of Kevlar the fins of the end were entangled in the fiber of Kevlar.

When one goes off in a steel target butt, the bullet fragments in many small pieces and creates superficial minimum damage, and the projectile becomes relatively small chips and the fine dust.

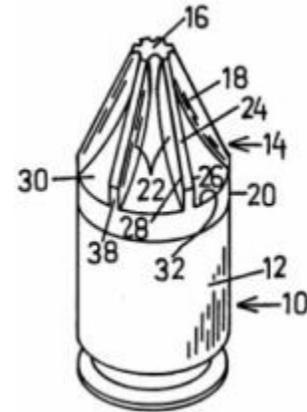


Image of the projectile on a vest of Kevlar Detail of the end after an impact on a vest of kevlar

After several iterations and many verifications, Charlie demonstrated to be working extremely well when finding all means so that its ammunition, fulfills all the requirements of the specifications of the FBI.

Ergonomic description

The end or "nose" is of cleared form, (16), of diameter reduced in the order of 112 inches, until arriving at the main body, (14) in caliber 45 inches. Six ribs or fins (18) radially extending later and externally to those of 60 degrees and finish in the surface of the exposed main pressure in the diameter (20) of the bullet. The productive surface (20) has a diameter of the caliber 4515 inches.



The ribs or fins (18) have their united base (22), the surface (24) trowel is what defines the thickness of the rib or fin, in the caliber 45 is in the order of 040 inches. The lateral one (22) is interconnecting with the surface (24), forming a right angle (90°), determining the edge (28).

Between the ribs or fins it is the side (22), and between the adjacent ribs he is channeling outside portion that has a surface denominated like (30), of parabolic or elliptical form, with the form that extends from its nose (16), to the productive surface diameter (20).

The curvature of this surface (30) is based on the vertical height of the nose (16), to the superior edge (32) of productive surface (diameter of contact with the bore), (20).

It is to mention the fact that this ammunition very presents/displays a better performance and over the ample phantom of situations that are generated in a shooting like that are found by the army and police, compared to the bullets of

conventional configuration which they trust the principle of expansion of the bullet to cause incapacitación.

It is possible to clarify to this given dualidad the characteristics before exposed, since in all the armies of the world the disguised ammunition are used, and simultaneously in the best police of the world the expansive ammunition are used, this is this single one in aclarativo tone, since he would be very long and tedious explaining because of each force it must have the specific ammunition, and knowing me I believe that it would extend me to the point on the matter to make technical a scientific report... perhaps in another opportunity.

The great capacity of incapacitation of this ammunition, is based at first completely different; the idea of its design takes advantage of the outer configuration in combination with a good speed, (more than any other of its type, and that is designed to expand at the time of the impact).

In the caliber 45 weight approximately 143 grains, and reached initial velocities of the weapon almost 1300 feet second (396, 24 meters per second). It is thought that with a development of the propellant charge in the same caliber (45), it can have a speed of still more fast mouth, of approximately 1400 feet per second (426.72 meters per second).

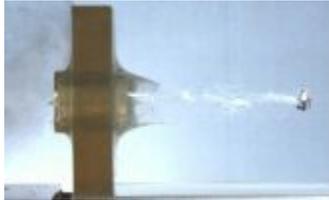
In the same way it has been experienced in the ammunition of long weapon, with one more a more aerodynamic configuration to comply at the highest speeds to the one than the projectiles of any caliber of gun travel, also it can be formed without disadvantages and of adapting to any ammunition of the type caseless.

Reflections of its creator

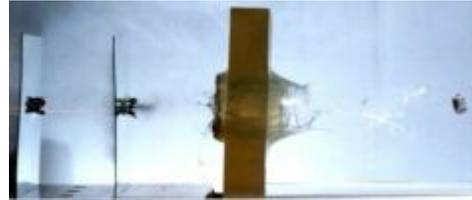
The ammunition disguised and of lead have been in use from the coming of the first semiautomatic pistols in the end of 1800's and principles of 1900's. This configuration was derived to mainly facilitate a trustworthy feeding in semiautomatic pistols.

Ends of type Cono truncated (trunkated cone as we know), disguised, they were originated shortly after before mentioned, around 1906. The German army adopted 9 mm Luger with end of truncated cone, those of hollowed end had its greater development after WWII (World War II).

They designed themselves with the purpose of one better incapacitación, so that the cavity at the moment of the impact with the human torso, she causes an extension of its surface, and creates a greater cavity in the wound.



Ballistic tests in the caliber 40 S & W
on gelatin



Ballistic tests done on gelatin, crossing two
steel plates, in the caliber 40 S&W

Summary of the present invention

The present invention shown in the caliber 45 of inches, at intervals has six fins or ribs had of 60 degrees around the end or in front the bullet. The fins radially extend of the line of outer center of armpit to the circumference of the bullet real diameter.

This ammunition has an improved capacity to inflict much more fast incapacitation that any other projectile for firearm. The projectile has a high speed because he is lighter than any other.

The combined effect of the greater penetration, speed and characteristics of the bent surface of the end, (the surfaces between the fins) what can be parabolic or elliptical, with the purpose of generating a flow radial of blood, and particles of the bone in the channel of the wound (with expansion of the resultant of the same one) generating a fast incapacitation.

This bullet has the ability to penetrate hard means, with a minimum of deformation, due to its high speed, its reduced area of border extremity that provides an initial resistance smaller, and its sharpened leading edges that are conducive to the penetration, instead of deviation that is typical of the ammunition of blunt end.

This bullet produces less backward movement because its construction reduces the weight of the bullet in comparison with those of present use. It lacks expensive processes, which generates that there is not an increase in his cost of makes.

This bullet has the ability trustworthily to feeds and works in automatic weapons and semiautomatic the thinned surfaces of the front in the outer segments of the bullet facilitate a trustworthy feeding.

A cap (pointed hood, cork, cover), of molded plastic can mount to the end of the bullet or the border extremity. The cap the surface internal female is formed to form an attack of precision to the end of the bullet.

The angular corner sharpened of the end of the bullet and the outer diameter that it gives to the internal surface of the plastic cap, in the impact with a target, will cause that the plastic cap is practically going away to disintegrate. The sum of the cap of plastic nose also provides a superior aerodynamic configuration and very reduced to drag coefficient.

Some years ago the company Sinterfire S.A., manufactured east projectile, and was being loaded in the well-known company/signature "Black Hills", at the moment the Continuous company Inc. metal has bought the patent to its sister and glides in a future not very distant to remove them to the market.

Status of Devel Bullet

Company	Product	Cartridge	Bullet Weight	Muzzle Velocity	Energy
Continuous Metal, Inc.	* Devel	9 mm	None yet	N/A	N/A
Continuous Metal, Inc.	* Devel	.40 S&W	None yet	N/A	N/A
Continuous Metal, Inc.	* Devel	.45 Auto	None yet	N/A	N/A

The Devel bullet was never sold commercially, except as a muzzleloader bullet. The bullets I tested for Charlie Kelsey were prototypes only. Continuous Metal, Inc. just purchased the Devel patents (2) from Charlie Kelsey's sister. Conintuous Metal plans on manufacturing bullets in 9mm, 40 S&W and .45 auto. Bullet weights will probably be 105, 125 and 155, respectively.

The bullet of Devel never was sold commercially, except for exceptionally as a charge bullet. The bullets that I only proved for Charlie Kelsey were prototypes of "Continuous Inc. Metal simply that it has bought the patent of Devel to the sister of Charlie Kelsey. Continuous Inc. Metal glides to make these bullets at industrial level in 9mm, 40 S&W and 45 car. The weights of the bullets probably will be of 105, 125 and 155 (grains), respectively.

Final reflections (by Tom Burczynski)

"... Charlie had great tenacity but it was forced to sell each personal possession of value that he had in a effort to commercialize his ammunition. Such exotic possessions included rifles, optical exotic, their personal pistols, computer and many other articles.

In addition, Charlie was using everything of generated entrance of the sales of website of its Devel muzzleloading sabot to only survive. My wife and I helped financially also to Charlie during this time (rent, payments of the automobile, etc.) but in the end these collective efforts fell.

Charlie was forced to leave the office, its automobile, its cellular telephone, and finally, even its apartment. In the last telephone call that he did me to me (the e-mails had stopped when he had sold to his computer) he said to me that he had to leave his apartment but he did not know where would go. Approximately to that same time her family (a sister and brother) filed a report of lost people.

I found out the death of Charlie by a mutual friend who had warned the Police Section of Georgetown. Then the police thought was about which it was being a suicide but shortly after it was discovered that its death was a homicide.

Charlie had put something bitter like result of which the life had distributed to him. It had become distrusting in general also from the people. Certain people had used it and they would have used it completely if he did not have himself separated of these relations. Companies and individuals the same had robbed him some of their ideas. The result of the net price of all this, combined with its financial problems, forged to that the deeply depressed man sank in a frustration and desperation.

Charlie remained with us in our house in several occasions, and we always had a time to discuss on arms, bullets, ballistics and policy. Of some way, I always managed to make him reir itself, without considering the problem. He really seemed to enjoy humor, the tranquillity and La Paz, my wife and I will surprise it much.

Closing, I would like to give emphasis to the fact that the police could not protect Charlie. The saddest thought that I have had is that if Charlie were forced to sell all its pistols, he was disarmed when they killed it. I am convinced that if Charlie had been armed, he still would be alive. This one is a sad commentary but one must think about the meaning of the words "the right to take a firearm again" Takes a weapon. Protéjase You and its family... "

Tom Burczynski



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**Very special thanks to Tom Burczynski, and for the family of Charles Kelsey
my respects and condolences.**

**Javier Abedini
Técnico Superior en Balística
Instructor de Tiro RENAR**

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