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STEEL HELMETS OF THE BRAZILIAN ARMY 1932 – 2005

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Translated from the Portuguese by Gabriel Lladó, with the kind assistance of David Powers.

Steel helmets were adopted by the major armies of the world during WWI (1914-1918). In different models and manufacturing processes, from cold stamping to forging; steel helmets were developed to give greater protection to the soldier against shrapnel, small caliber projectiles and even bumps to the head. Statistics recorded in WWI showed that 80% of the wounds were to the head as a consequence of the kind of trench war fighting mainly on the Western Front in the early days. This investigation led the armies to adopt steel helmet to improve individual protection of their personnel.

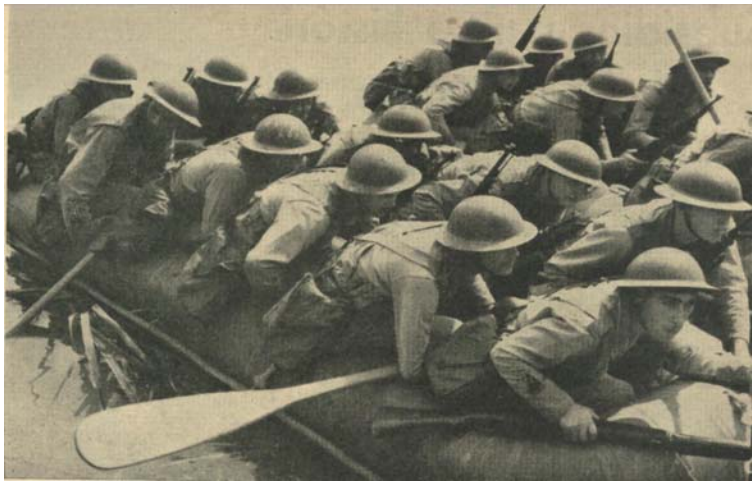
In Brazil, steel helmets began to appear only in 1932 when the major civil war, known as the "Revolução Constitucionalista" (Constitucionalist Revolution), erupted, started by the Sao Paulo State on July 9th of that year.

The "Paulistas" (inhabitants of Sao Paulo State) created several departments to organize their war effort against the regime of Getulio Vargas. One of those departments was in charge of manufacturing steel helmets as it became necessary to provide some protection for all the combat forces involved: the Voluntários (Volunteers), the Força Pública (Public Force, kind of Militarized Police) and the Exército (Army).

A private collector provided two steel helmets to this Department: a French Adrian 1915 and a British Mk I 1916 which were examined and approved for production in thousands. The French model was slight modificated in the crown, mainly in the form of a comb vent, a characteristic of this model which generated two versions. The British model was copied it is.

Unusual color picture taken on 1932 showing Sao Paulo combat troops with French model helmets manufactured during the Constitutionalist Revolution, placing a Krupp 75 mm C-28 cannon. (Bloch EditoresArchive). Constitutionalist recruiting poster, showing a soldier using a French model steel helmet (Author's Collection).

Three Constitucionalist troopers. The soldier in the middle is using the third type of French helmet, evolved from the Adrian model and manufactured by the Sao Paulo industry in 1932. Note the emispherical knob vent instead of the comb vent. (Author's collection). View of the three different elmets produced at Sao Paulo in 1932. These ones belong to the Military Police Museum at Sao Paulo. (picture by the author)



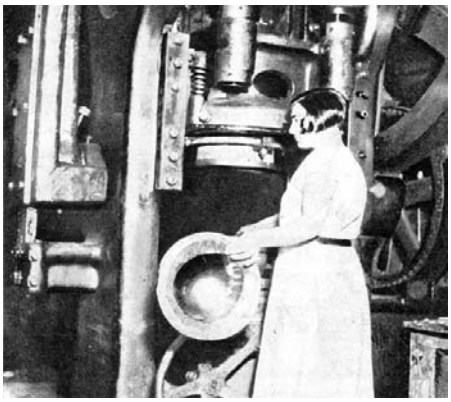
Brazilian soldiers during maneuvers in 1944 using British Mk I steel helmets. (Photo: Author Collection)

The Associação Comercial (Commercial Association) was granted the responsibility of collecting funds for a mass production toward the end of July 1932.

Regular troops – Army and Public Force – and Volunteers, used caps, kepis, hats and cork or cardboard helmets. Those helmets were covered with leather or cloth and sometimes were waterproof but did not provide the necessary ballistic protection to the troopers.

The production of the first steel helmets manufactured in Brazil was entrusted to several companies, **Cia de Louças e Esmaltados**, **Indústrias Reunidas Martins Ferreira**, and **Bernardini Indústria e Comércio,** were just three of them.

Women assembling liners and chinstraps on the British model Mk I in 1932. Stamped helmets, lacking the painting, the liner and the chinstrap (newspaper's section-Author's collection)



Woman working on an hydraulic press, stamping British Mk I helmets in 1932. Male workers manufacturing British Mk I steel helmets in 1932. (newspaper's section-Author's collection)

Those industries produced the helmets by cold stamping and delivered them without further finishing. The Commercial Association painted them green and installed the leather suspension and chinstrap. Originally they were painted bright olive green but this soon was replaced by a matt green color.

Three models of helmet were produced: one on the British helmet, which was exactly copied and two on the French one. The difference of the latter was on the crown where the comb vent was shortened and slightly different in relation to the original model. On one variation there was a small semispherical knob vent on the crown instead of the

comb vent as on the other model. Both characteristics had the function to provide ventilation.

It became the icon of the revolution as it was represented in a wide variety of forms: on medals, cartoons, sculptures, bicorns, pins and also immortalized on recruiting posters. Engraved on the leather liner of the British model was: ***Oferta do Povo Paulista aos Soldados da Constituição***. (Offer of the People of Sao Paulo to the Soldiers of the Constitution). And on the French model's liner: ***O Povo Paulista aos Soldados da Constituição***. (The People of Sao Paulo to the Soldiers of the Constitution).

Engraving on the leather liner of British model. (Author's collection)

Engraving on the leather line of French model.

70,000 of the three models were produced and most were distributed to the Sao Paulo troops. But as this revolution lasted only three months and the Constitutionalists were defeated, the Federal Government took control of the remaining stocks and the production lines.

Those helmets were not destroyed and so were issued to the Brazilian Army that for the first time started to wear steel helmets. Production was continued at the Fábrica de Projeteis de Artilharia (Artillery Projectiles Factory) in Andaraí, Rio de Janeiro, at the (then) Distrito Federal (Federal District), because the ones wore at that time were made of leather and cork, also of French origin.

Factory at Andaraí - RJ, in 1937. Note hand finishing procedures. (Historic Archives of the Army). French cork and leather helmets used by Brazilian soldiers on 1947 (Southern Command Military useum at Porto Alegre, Rio Grande do Sul State)

Official publication of the Army in 1941 showing the new Officer's uniforms with leather covered cork helmets. Note the long comb vent. Postcard of Brazilian soldier, 10th Infantry Regiment with leather covered cork helmet in 1944. (Author's collection)

This production took place between 1933 and 1934, and it was possible to see Army soldiers wearing steel helmets of the French model produced in Brazil attacking the rebels during the Communist Upheaval of 1935 at Rio de Janeiro.

Actually only two of the three models continued in production: the French model with the short comb vent and the British Mark I. It is common to see WWII (1939–1945) era pictures of Army soldiers wearing those two models of helmets. Close examination must be made in order not to confuse the French model steel helmet with the leather covered cork helmet, largely used by the troops. Most of those had a badge at the front and a reinforcement edge along the brim.

Rare helmet French model Brazilian Army leather covered cork helmet, property of the Southern Command Military Museum at Porto Alegre, Rio Grande do Sul State (photos by the author)

During WWII, Brazil formed an Expeditionay Force (FEB – Força Expedicionária Brasileira) that fought alongside the Allies in Italy from 1944 to VE-Day.

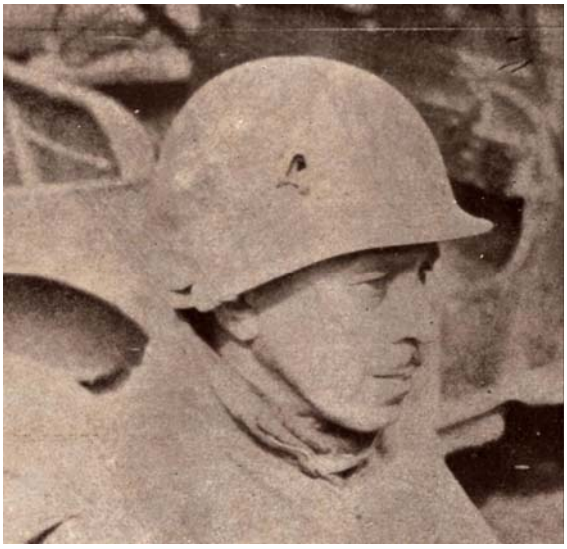
During that campaign the U.S. M1 model (adopted by the US Armed Forces in 1941) was issued to the FEB by the US Army. This helmet is composed of two elements: an outer steel shell and an inner fiber shell that holds the suspension. It can be used alone (for sun protection or in non combat conditions) or with the steel shell in battle environments.

Rare color picture of the BEF (FEB) in the Italy Campaign in 1944, showing Brazilian soldiers taking instruction about the use of the bazooka. Note uniforms and helmets form US origin. (National Archives USA). Two Brazilian soldiers with US M-1 steel helmets, adopted by the BEF and after the war by the Brazilian Army, on an M-8 6x6 armoured car on a recon patrol over Zocca. (Cap. Pitaluga Museum)

This helmet was produced in the largest numbers in the world having reached 7.500.000 in 1943 and a total production of 22 million by VJ day.

These helmets were responsible for saving the life of many Brazilian soldiers. I would like to cite the case of Ten. (Lt) MANOEL **GENITO** DO CARMO, commander of 2nd Platoon, 7th Co, First Infantry Regiment on the attack of Monte Castelo on December 12th, 1944. His story is narrated in the book, "A Epopéia dos Apeninos", page 241/243, written by José de Oliveira Ramos. There is described a shocking moment of that struggle where the helmet played a starring role in saving the Lieutenant's life.

"...Lt. Genito calls by telephone the Company commander, gives him a situation report and requests help to retrieve his men and try once more to neutralize the machineguns and direct their unit's mortar rounds. At that moment he is hit by a rifle bullet that perforates his helmet through one side to the other, producing a deep wound in the scalp but leaving the skull bone untouched. With the heavy impact of the bullet and blinded by blood running down his face, Genito searched for cover. Making two jumps to his left, he is hit by a machinegun burst that rips open his uniform without touching him After some further incidents he gets out of the combat zone and is helped by an Italian family who leads him to the Medical Station of the Sampaio Regiment. He was later taken to the Evacuation Hospital in Pistoia, where he was operated on. After a few days he was returned to his Regiment, where he served until the end of the campaign."




Detailed view of the helmet of Lt.Genito hit by a rifle bullet that perforated his helmet through one side to the other without wounding him seriously. MK-1 after receiving a shot. Head scar of Lt.Genito. Note that he is holding the helmet perforated by the rifle bullet, Pistoia 28.12.44. (Photos: Book "A Epopéia dos Apeninos", page 241/243 – author collection)

This excerpt illustrates very clearly a situation where the use of a steel helmet made the difference between life and death.

After victory, Brazilian troops returned to their home Country at the end of 1945. Shortly afterwards, the M1 was adopted by the Brazilian Army. From 1993 the M1 has being replaced by a Kevlar model known as P.A.S.G.T. (Personnel Armor System, Ground Troops) in use by the US since 1980. During UN peace missions in Angola and Mozambique, Brazilian troops were the first to use this model. In Brazil, the company: Inbrafiltro, from Mauá, Sao Paulo State, is making a similar model in Aramid fibers having high ballistic qualities.

The M-1 helmet would remain for years in use in several Brazilian Army units. It is the last helmet to be built from steel and with the creation of new composite materials, it will be possible to replace it with more resistant and lightweight affording helmets, even greater protection to the soldier.

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