

Argentine Civil Aircraft

Part 3

By (the late) FEDERICO A. GIRO and ANTONIO M. BIEDMA R.

The Summer 1967 JOURNAL began the first of a five-part series on Argentine Civil Aircraft. The series constitutes the only articles published outside of Argentina covering aircraft of original Argentine design, and describes civil airplanes only, not including lighter-than-air or gliders.

Antonio M. Biedma R. is the senior aeronautical journalist in Argentina, has private pilot license No. 303 obtained in 1926, and autogiro brevet obtained in 1932. He has published many books and articles on Argentine aviation and has been president of the Circulo de Lscritorios de Aerostronautica (C.E.A.)

The announcement of the passing of Federico Giro was given in the JOURNAL (Vol. 12, No. 4, p. 303). An ardent aviation enthusiast, he was the Flying Review International correspondent for Argentina and A.A.H.S. member since 1957. The present series of articles was completed by him, with Mr. Biedma in 1966. They will be concluded in the Fall JOURNAL.

Part I began in Vol. 12, No. 2, pp. 120-124; Part 2 continued in Vol. 12, No. 3, pp. 195-197. The series is presented alphabetically to facilitate later consultation of the list.

It has thus far included the following:

Aer-Fabric AF-5 "Chuschia"
Aero-Bolio 95, Aiello 1,2,5,4, and 5
Artigala "Argentino I"
Artigau "Coronel Pringles", AVI 205
Borello I "El Argentino" and II,
"El Colorado", Baserga B-1
Biro de Ditro "Patoruzu"
Briggiler 1911
Castaibert 910-I, 911-II, 912-III,
913-IV, 914-V, 915-VI and 915-VII
Conord 1920, Correa 1911
Delayque 1910 and 1915

It may be seen therefore, that Argentine Civil Aviation began very early, contemporary to the pioneering of Bleriot and others of the 1907-1910 period.

Delest "Porteno" - Juan Alberto Delest was born in Buenos Aires in 1892 and was sent to study in France. There, he obtained his title of technical electrician. He had the opportunity of being assistant to flyer Louis Paulhan who gave him his interest in flying machines. Back in Argentina in 1912, to accomplish his tour of duty with the military service, he began to frequent the flying fields and ultimately decided to build his own aircraft.

He was strongly influenced by the double mono-

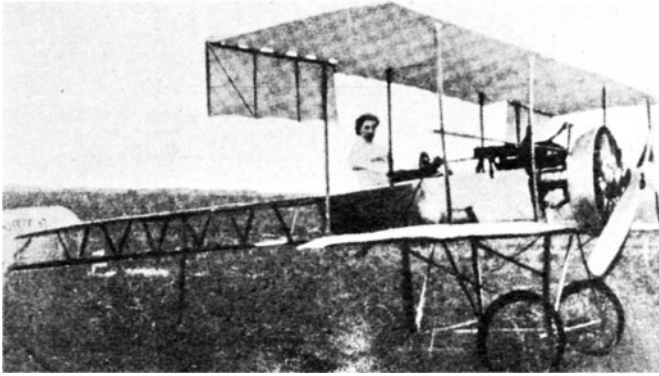
plane of Henri Kapferer who had begun to build this type at the Astras establishment, a type that in Argentina was known through the Breguet types imported from France. Such conception of a double monoplane was actually no more than a biplane. At that time, this designation served to distinguish the biplanes (that had a fuselage like the monoplanes and a tractor engine) from the more commonly seen biplanes with a frontal elevator and pusher engine.

Delest began the design of his little "double-monoplane" in 1915. Construction started in his home, in which he had a small workshop, later moved to Villa Lugano to give the last touches. He bought, from Juan A. Roth, a 50 h.p. Gnome which belonged to the Voisin in which pilot Henri Bregi had flown the first officially homologated flight in Argentina. The accompanying photograph, (retouched) shows the general construction. "Flying ailerons" were fitted to the upper wing in order to obtain better lateral stability.

Delest left Buenos Aires prior to completion of flying trials to join the French Air Force. He obtained his military pilot license in France and gained decorations for his behavior in combat. Once the war was over he returned to Argentina and formed the "Compania Aerea Condor" which, after a brief time, was closed due to economic difficulties. On 10 April 1921 Delest died in a crash of his Farman F 40 at Arroyo Aguiar, Santa Fe.

Farge "Picaflor" (Humming Bird) - In April 1959 the "Circulo Aereo Alfa" was established at Turdera (Buenos Aires province) with the intent to maintain training flights. With this purpose, the building of an economic airplane, easy to construct, was faced. The Circle proceeded to acquire from Mr. Juan de la Farge his small sport plane, "Rotelet" which he had brought unfinished to Buenos Aires from France. Engineer J. Davos recalculated the machine and construction began with some modifications. This little all-wooden monoplane had a cantilever low-wing, a fixed undercarriage and a closed one-seat cabin. The engine was a 55 h.p. two-cylinder built by de la Farge. Its first flight took place on the 27th of February, 1962. After twenty-five flying hours, lamentably, pilot Hector Rosso crashed the plane on 3 June 1962, due to poor handling, at the Canualas airport, losing his life.

Gardey Giroplane - This was the first attempt to build a helicopter in Argentina, or better to say, an aeroplane of vertical takeoff capabilities. In the newspaper "La Nacion" dated 24 March 1910, comments on a new design created by Mr. Pedro Gardey were published. First a flying model was built at a carpentry in Buenos Aires. It had a span of 1.10m (3 ft 7.25 in), and a length of 1.50 m (4 ft 11.5 in) and rotors were powered by two large mainsprings,



Delest "Porteno"

as no small suitable engine was available. The model raised successfully from the floor but so quickly that it hit the ceiling and crashed. Pedro Gardey and his son Juan began then to study the next step, building a prototype. An Anzani engine and 3/4 in. steel tubes were imported, a machinist was chosen, and all material was delivered to the "estancia" of Mr. Gardey, situated in "Las Acequias" near Rio Cuarto, Cordoba. At the beginning of 1911 construction began. Two big propellers 8.00 m. (26 ft 4 in) diameter were built using steel tubes and aluminum foils. But the first trial revealed a weakness. After reaching a height of 8 meters (26 feet) the rotors collapsed and Gardey's invention violently hit the ground.

Encouraged by the altitude obtained Gardey contracted the services of the French technician Mr. Leonard Picard, who, after rebuilding the machine was able to reach the height of about 100 feet. But once more the plane crashed. A new engine and other rotors were to be imported, so Gardey sent Mr. Picard to the United States with the mission to observe and buy the required elements. Time elapsed and no news was received from Picard. Finally in 1913, through the Argentine Consulate in New York, information was received that Picard had died tragically. Discouraged, Gardey set away the remains of the machine in a shed and later fire took forever this ambitious project.

Giannoni E. G. No. 1 - In the city of Mendoza, Espartaco Giannoni began, in the year 1928, the construction of a parasol monoplane of his own design. This high-wing, three-seat aircraft could not be finished due to economic difficulties of his con-



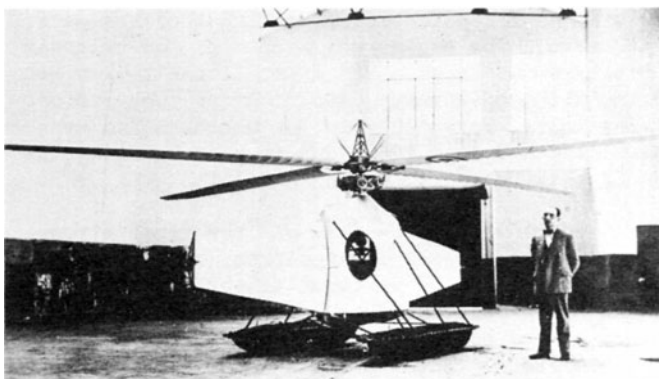
Farge "Picaflor"

structor. After three long years the wooden structure had been finished and covering was the next step, but further work stopped because of the impossibility of buying the 160 h.p. Curtiss engine envisaged by Giannoni to power his aircraft. Later, on 8 September 1934 Giannoni successfully flew an Avro "Avian" built by himself and equipped with a 74 h.p. Cirrus engine. He also built two Albatross 3E2 gliders, one of which flew in December, 1938 and obtained the Argentine record for its category, but was not homologated.

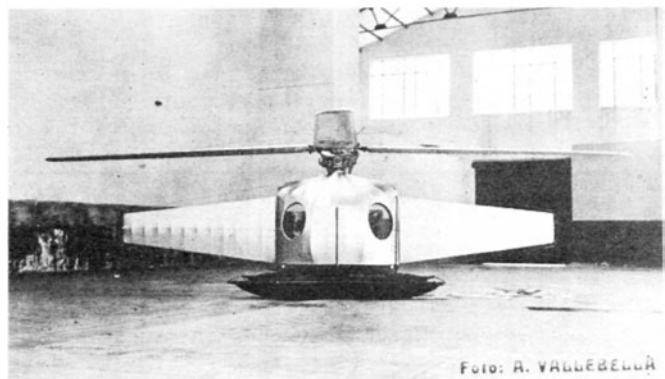
Gresci Helicopter - During the years 1933 and 1934, the Argentine technician Victor Gresci, with economic aid of Mr. Sergio D. Romero and assistance of Salvador A. Bavastro built a helicopter of his own invention. It was powered by a 50 h.p. rotary engine built especially by Gresci. The main rotor had four pitchable blades.

Once finished, the helicopter was moved by Bavastro from Gresci to a workshop in Buenos Aires large shed, the property of "La Vascongada S.A.", a concern devoted to industrial milk derivatives. The first trials were held, but lamentably without success, as when, at the moment the helicopter raised the engine, froze and broke up. Lacking a suitable replacement engine, Gresci gave up further work and the project was filed.

Henlai 275 - Two friends, Mr. Ernesto F. Hennings and Alberto Laich, as a private venture, began in 1943 the construction of a small monoplane, resembling in some respects the Messerschmitt Bf. 109. It derived from a previous design of this couple, which construction was initiated in 1941 but was



Gresci Helicopter

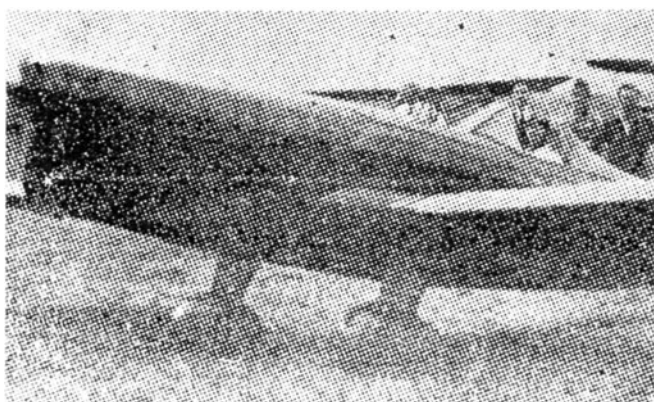




IMPA "Tu-Sa"



IMPA RR-11



IMPA "Chorlito"



Lavelli "Halcon"

never finished. No better luck had the Henlai 275 in spite of its advanced stage of construction.

Covering of duraluminum sheets was not obtained due to the shortage of this material during the war. This prevented their following strictly the design, and discouraged the continuation of the project. The power plant was to be a Praga B-2 developing 45 h.p. The Lowing of cantilever type was of thin structure, spanning 5.96 m. (19 ft. 8 in). It had a monocoque fuselage and retracting landing gear, manually operated through a mechanical system.

Three other projects were worked out by this team. In 1952 the Henlai 200/52, a one-seat flying wing, to be powered by a locally built two-stage engine developing 28 h.p. built by Daniel Bautista Sales. Second was a competition sailplane, and finally, in 1954 the Henlai 140 h.p. was designed as a low-wing, three-place airplane with retractable landing gear and all metal construction. Building of these was to have been sponsored by the Instituto Aerotecnico (Cordoba). Due to the death of Mr. Sales, and that Laich went to work for Hiller in 1955, these airplanes did not materialize.

We now arrive at the production of the firm I.M.P.A. S.A. (Industrias Metalurgicas y Plasticas Argentinas S.A.). This was a concern dedicated, as its name indicates, to production of plastic and metal parts. It was founded in 1942 by the well-known Austrian weapons builder Fritz Mandl, and due to the initiative of Spanish engineer Alfredo Davinz Ferrer aeronautical work began. Works were installed at the Quilmes aerodrome and design and calculations for three different airplanes were done by Davinz Ferrer under the supervision of engineer Jose M. Sueyro. These were the IMPA RR-11, RR-12D, and the RR-13D. Of these, only the first saw light. Later the IMPA Tu-Sa, designed by engineer Rosario Lo Bianco and Mr. Juan F. Bonzalez was built, plus a prototype of the RR-12D known by the name of "Chorlito" (curlew). Also some German P 38 gliders and Grunau Babys were built prior to the close of the firm in 1945.

IMPA RR-11 - This light touring plane was shown in public for the first time on 25 July 1942, at the airport of General Pacheco, being flown by pilot Siro a Comi, later representative for Cessna in Argentina. It was a low-wing cantilever monoplane with two seats side-by-side and dual controls in a closed cabin, wood construction in spruce and birch, and an independent landing gear of fixed type and tail skid. The tail was simple, of cruciform type.

Only the prototype was built. Specifications were: Power Plant: Lycoming 0-145-B2, 65 h.p. Span: 11.05 m. (36 ft 3 in) Length: 7.42 m. (24 ft 3.5 in) Height: 2.25 m. (6 ft 8.5 in) Max. speed: 162 km/h (100 m.p.h.) Cruising speed: 143 km/h (89 m.p.h.) Max. cruising speed: 155 km/h (96 m.p.h.) Min. speed: 60 km/h (37 m.p.h.) Max. ceiling 5,000 m. (16,404 ft) Endurance: 5 hours.

IMPA RR-12D - This was a military advanced training monoplane, of highly polished design but whose construction was not completed. Work was begun in 1942. It was a single-place monoplane of cantilever low-wing, with flaps built of wood. Fuselage was of mixed construction. The tail unit was of normal cruciform type, in wood. The landing gear retracted inwardly. Weapons to be installed were two 7.65 machine guns on the engine cowling, shooting through the airscrew disc. Also bombs on

racks under the wing could be fitted in order to use the plane as a dive bomber, and cameras could be installed. Power would have been provided by a de Havilland Gipsy Major, of 130 h.p. Estimated performance was to have been: Max. speed: 300 km/h (186 m.p.h.). Range: 1,000 km (621 miles). Service ceiling: 6,000 m. (19,684 ft). Endurance: 3.5 hours.

IMPA RR-13D - This was a project developed in 1942 for a light twin-engined seven/eight place cabin monoplane, whose construction was not begun. Power plants to be installed were two de Havilland Gipsy Six of 205 h.p. each. The design incorporated an enclosed cabin seating six, a cantilever low-wing of all-wood structure with a reinforced leading edge and plywood covering, a fuselage of plywood box structure, and tail unit of cantilever monoplane type. The fixed undercarriage design was of independent legs enclosed in fairings.

IMPA "Tu-Sa" - This low-wing cantilever monoplane was the only machine of this factory that was built in series. The name "Tu-Sa" derived from the words Turismo Serie "A.". It was also designated as IMPA LF-1. Designed by engineer Rosario Lo Bianco and Mr. Juan F. Gonzalez it derived directly from the prototype.

A contract between the Direccion General de Material Aeronautico and IMPA, signed in 1943, stipulated the construction of twenty-five airplanes, ten of them powered by a Continental A-65, another ten with the 65 h.p. Lycoming O-145-B], and the last five with the Continental A-80. One of these five was baptised IMPITA and was used for experimental trials. Its performance was approximately 25% superior to the standard 65 h.p. powered plane.

The first aeroplane of the production batch was flown in public by the then General Director of Civil Aeronautics Dr. Samuel M. Bosch. After some time the use of this plane was forbidden by the Board of Aeronautics due to some accidents attributed to constructional failures. The wing structure of this plane was of wood with fabric covering, wooden frame and fabric covered ailerons. The fuselage also had wooden framework with fabric covering, a tail unit of monoplane type and fixed under carriage of single leg cantilever type. Wheels and legs enclosed in streamline fairings.

One of these airplanes was flown on 19 December 1944, with a 100 h.p. Kinner K-5 engine, but the trials did not show the expected results. Its specifications were: Span: 11.50 m. (37 ft 8-1/2 in) Length: 7.42 m. (24 ft 3-1/2 in). Height: 2.97 m. (9 ft 9 in). Total weight: 607 kg (1337 lbs). Max. speed: 154 km/h (95 m.p.h.). Cruising speed: 133 km/h (82 m.p.h.). Landing speed: 55 km/h (34 m.p.h.). Endurance: 4 hrs. 10 min. Service ceiling: 3,600 m. (11,810 ft).

IMPA (Chorlito" (Curlew) - This little one-seat light training monoplane was derived from the RR-12D design. The retractable undercarriage was replaced by a fixed single-leg cantilever type, with wheels and legs enclosed in fairings. Its first flight was held on 15 June 1943, by pilot A. Pessagno at the Quilmes airport, but trials were not successful and no further airplanes were built. Its Power Plant was one 130 h.p. de Havilland "Gipsy Major" engine. The wing was of wooden structure with plywood covering. Data was never published.

Lavelli "Halcon" (Falcon) - Carlos Argentino Lavelli was born in 1894. At 18 he accomplished his military service in the Navy aboard the Coast Guard LIBERTAD, and in 1915 he was transferred to the Arsenal del Rio de la Plata, at which the Navy flying school of Master-Gunner Joaquin Oytaben was operating. There he learned to fly, but lamentably the death of his instructor on October 16 of that year cut his hopes of flying, as the school was closed. Having finished his obligatory service he travelled through several flying fields, hoping to reinitiate his flights, but the European war influenced the civil air activities, by then very poor, and he decided to build his own aircraft. He selected the Farman as one of those he had flown with Oytaben at the flying school. He succeeded; on 4 January 1918 he obtained his license, No. 134, flying a Farman he had built for this purpose. In 1920 he began to build a monoplane of his own design, following the lines of the Bleriot monoplanes. This machine was powered with a 50 h.p. Gnome Rhone engine. He received the help of Mr. Jose Maria Pesquero, president of the "Club Internacional de Aviacion" located at Villa Lugano airport.

After being built, successful trials and aerobatics flights were held, but no records of this machine were preserved. In the meantime Lavelli continued to fly his "good old Farman" with such a love that until 1933 he still used it, in spite of the modern machines beginning to arrive in Argentina. This pioneer of the Argentine wings passed away on 12 December 1960.

(To Be Continued)

DID ANYONE KNOW BESSIE?

Beneath a small clump of trees in the Lincoln Cemetery on Chicago's south side stands a granite monument. On the front of the stone is an oval photograph of a pretty woman dressed in flying clothes and standing beside what appears to be a "Jenny". Inscribed above is the simple legend: "Bessie Coleman, 1892-1926".

Another block opposite the monument bears a metal plaque reading: "In memory of Bessie Coleman, one of the first American women to enter the field of aviation, remembered for her courage and accomplishments. She fell 5,300 feet while flying at Jacksonville, Florida, April 30, 1926. Presented by Cooperative Business League, Cook County, Illinois and Florida Friends."

A faded yellow clipping in the *Chicago American* files datelined Jacksonville reports that Miss Coleman's airplane went into a tailspin and she fell out of the cockpit. Later investigation revealed that a wrench had jammed the controls.

Employees of the cemetery state that no one ever comes to visit the grave and, at time of burial, the next of kin was Georgia Coleman, 3970 Vernon Street, Chicago. Joyce Gourfain, of the African-American History Museum, 5200 S. Kimbark Avenue, Chicago, is looking for information concerning Miss Coleman's life and the circumstances surrounding her death.

The above notice, from the *Chicago American* was submitted by Member Ernest R. McDowell of that city. It is of course natural that it should be repeated here, since it raises a question concerning aviation history, and where else should it appear than in this JOURNAL, devoted to the recording of aviation history. We would like to hear the results of this.