

PROFILES

WINGS OVER AMERICA

EARLY in 1927, the du Ponts decided to enter aviation. When the news got abroad, almost every aeronautical manufacturer in the country rushed to Wilmington to obtain their support. The du Ponts, however, proved deliberate. When their decision was finally announced, there was a mild sensation, for they had rejected all well-known firms and taken over a new one-man organization, the Bellanca Aircraft Corporation. More astounding, they had acceded to the demands of Giuseppe Bellanca that he—and not the du Ponts—should have control of the proposed combination.

The spectacle of the small Italian defying the feudal lords of Delaware is inspiring. He appreciated their attention; from bitter experience, he knew what advantages lay in the financial support they could give him; but he stuck to his demands. Twice negotiations were called off, and both times Bellanca returned philosophically to his factory on Staten Island. The factory was an abandoned, weather-beaten shipyard, but work was proceeding there on orders enough to keep the place busy for months—and the orders had been taken with full payment in advance.

Bellanca was at length coming into his own. His plane, the Columbia, had successfully flown the Atlantic, and broken Lindbergh's long-distance record. The du Ponts made further overtures. When the final conference was over, Bellanca emerged as president of the new organization, with fifty-one per cent of the stock in his possession. The du Ponts, however, are scarcely accustomed to minor rôles—especially when they are providing impressive amounts of capital. Inevitably there occurred a clash of policies. Bellanca found a strong supporter in Otto Kahn, whose son Roger, having turned to aviation, was on the board of directors of the corporation. Kahn interested other bankers in the proposition, and a new issue of stock was subscribed in full before it was advertised. The du Pont interests were bought out and control remained, and still remains, in Bellanca's hands.

Bellanca's present situation is fairly astonishing to many of his

friends who have always looked on him as an artist—a genius in his line—but a deplorable businessman. Ten years ago those friends called him Professor. That was a mark of respect, but it was also descriptive in quite the conventional comic-paper manner. Bellanca habitually

forgot his necktie, and let his hair grow until the matter was called to his attention. Then he cut it himself. For the past three years, *Who's Who* has attempted to get a biographical note from the man. He keeps forgetting it. When Chamberlain landed the Columbia after his long hop to Germany, Bellanca dismissed the incident with a single sentence. "The flight," he said, "has not added anything of moment to the science of aviation."

A large part of the time his mind is quite literally in the clouds. The design of an airplane is comparable to the design of a bridge, a ship, a motor car, but is ever so much more involved. Ordinary engineering problems are complicated by the necessity of construction that must be light in weight, and yet very strong. Any first-rate engineer could design a plane that would fly, but in all Bellanca planes there are certain characteristic departures from ordinary practice. If these are mentioned, Bellanca grins. They are the secrets of his success. Eventually they are taken up by other designers, but the process is astonishingly slow. Bellanca cannot understand it. "If they only knew," he says.

His cabin monoplanes, of which the old Columbia is a good example, display a certain feature which has been typical of his design for at least five years. Roughly, the Bellanca machines are built so that an end-to-end cross-section of the body would correspond with a cross-section of a normal airplane wing—that is, it is convex on top and flat underneath. This feature is of great importance, as it imparts a tremendous lift to the



HYCO
GALLERIE

Giuseppe Mario Bellanca

machine when in flight; indeed, at a sufficiently high speed, a plane of this type could conceivably fly without wings, on the lifting power of its body alone. Although the idea has been adopted recently by one or two other designers, the majority, to the astonishment of Bellanca, still use a construction that is precisely the reverse.

When water-cooled motors were used almost universally, Bellanca used air-cooled motors. His enthusiasm for them eventually led to a connection with the Wright Aeronautical Corporation. Bellanca was to design planes to exploit the air-cooled motors that Wright was introducing. Important purchasers of these motors were allowed the privilege of copying the Bellanca plane's design. The Ryan monoplane that Lindbergh used was produced in this way. Originally, Lindbergh wanted Bellanca's Columbia; but the Wright Corporation would not consider selling it, especially for so hazardous a project as the Paris flight. Lindbergh took what seemed the next best thing and carried it to glory. There is an irony in this that is typical of Bellanca's career.

AS a very small boy, he was fascinated by the phenomenon of the air. He was born, in 1886, in a Sicilian town called Sciacca. The town is on a hill that rises sharply from the sea. It was, Bellanca recalls, a perfect place for kites. The wind swept up the slopes and carried the kites aloft. Bellanca had endless opportunity for observing the action of air in motion. He said once, "I can see air."

Near his home was a pottery and, in the course of his boyhood, he threw away, one by one, the countless fragments of porcelain heaped beside the kilns. He scaled the pieces against the wind, with the wind, at angles to the wind. The peasants kept out of range, and experiments went on until Bellanca got interested in marine propellers. Then came news of the Wrights' successes in America, and

Bellanca's thoughts went skyward. His decision to embrace aeronautics, however, did not become final until 1908, when Léon Delagrangé made his record-breaking flight in France. "That," says Bellanca, "was the moment." A wealthy friend supplied funds for the building of a plane. He also supplied some very definite ideas as to following the Wright design, but Bellanca could not agree. The Wrights mounted their propeller behind the engine; Bellanca wanted it in front to get a clean bite into undisturbed air. The friend won out, at the time, by threatening to withdraw his funds, but today almost all planes, of whatever design, are tractors, with propellers in front.

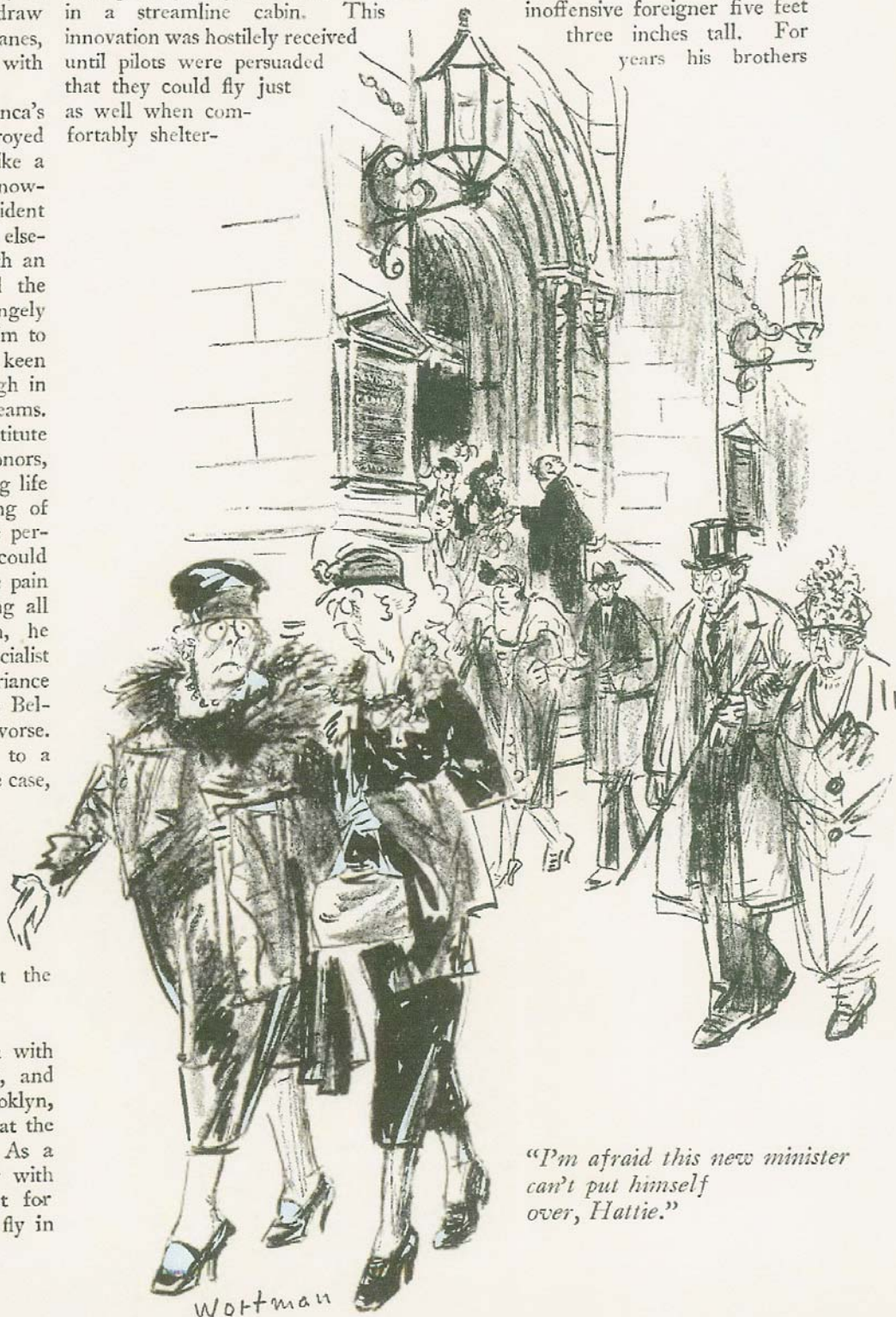
When this first plane of Bellanca's was finished he immediately destroyed it in a magnificent crash, for, like a true pioneer, he took off without knowing at all how to fly. The incident turned the rich friend's thoughts elsewhere and Bellanca was left with an impressive pile of wreckage and the beginnings of experience. Strangely enough, his family encouraged him to go on. They were people of keen intellect, thrifty, prosperous enough in a modest way, and capable of dreams. The boy was sent to the Royal Institute of Milan, was graduated with honors, and found himself suddenly facing life oppressed from too much reading of Schopenhauer. By some strange perversity of his imagination he could produce at will almost intolerable pain in any part of his body. Lacking all faith in the medical profession, he nevertheless visited every specialist from Milan to Messina. The variance of their diagnoses did not relieve Bellanca's skepticism. He got worse. Chance at length brought him to a pioneer in psychic disorders. The case, it appeared, was elemental. At school Bellanca had specialized in efficiency engineering, but in his subconscious there stirred the romantic wish to fly. There was the remedy! Halfheartedly Bellanca argued against flying as a career, but the doctor overruled him.

IN 1911 he came to America with his parents, his six brothers, and his sister. They settled in Brooklyn, and Bellanca spent all his time at the flying fields on Long Island. As a foreigner, especially a foreigner with queer ideas, he was the target for ridicule. He taught himself to fly in

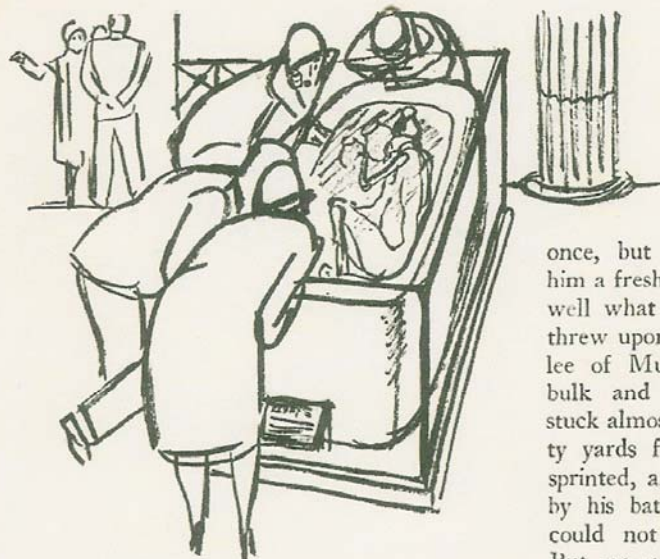
a plane he built in the cellar in Brooklyn. Dire prophecies greeted its first appearance on the field. It was a parasol monoplane; the wing was mounted above the pilot's head. It was powered by an air-cooled motor, and stupendous efforts had been made to eliminate all structural resistance. It had only one fault: it was too far ahead of its time. Ten years later, Bellanca brought the idea out of seclusion. Again he used the parasol idea and the air-cooled motor. He further eliminated resistance by enclosing everything, including the pilot, in a streamline cabin. This innovation was hostilely received until pilots were persuaded that they could fly just as well when comfortably shelter-

ed. Once the idea was accepted there ensued an epidemic of cabin monoplanes.

Bellanca's father helped him with the woodwork on the original model, and his mother sewed the linen wing-fabric—doubtless with prayers and misgivings. Bellanca adored her. Neither of the parents lived to see their son acclaimed; what they did see was a series of frustrations worthy of Job. Bellanca did not relish his continued bad luck, but a certain grim humor enabled him to appreciate the spectacle of life repeatedly manhandling a small, inoffensive foreigner five feet three inches tall. For years his brothers



*"I'm afraid this new minister
can't put himself
over, Hattie."*



have joked about his resemblance to Chaplin. Actually the resemblance is not marked, and it may be that the family recognized it as being largely spiritual. At any rate it was appropriate that the little man should occasionally have his turn.

When Bellanca was conducting a flying school on Long Island one of the pupils was Mile-a-Minute Murphy, a former New York bicycle cop with a reputation for speed. He and Bellanca commuted daily to Mineola,

where they kept their bicycles in the station. One morning Murphy proposed a race to the field. He sprinted and went into the lead at once, but he had quartering against him a fresh breeze, and Bellanca knew well what tremendous resistance that threw upon his rival. Sheltered in the lee of Murphy's two-hundred-pound bulk and pedalling easily, Bellanca stuck almost alongside until he was fifty yards from the finish. Then he sprinted, and Murphy, worn out by his battle against the wind, could not meet the challenge. But no one at the field ever believed Bellanca had beaten the champion.

BELLANCA got used to such skepticism. In 1917 the War and Navy departments looked on him as only one more crazy inventor. What he proposed then as a fighting plane was so far ahead of existing practice that the authorities have not yet come to a proper appreciation of his idea. Bellanca hated war, but since it existed he had set about the design of something that would sweep the skies.

After the war he had a better chance to demonstrate his abilities. In the annual National Air Races he swept

the efficiency contests, winning every one he entered. At the last meet in 1928, in Los Angeles, his planes took both the efficiency trophies, and after the meet one of the ships set a new American endurance record.

Byrd expressly specified a Bellanca ship for the Antarctic trip; Henry Ford donated one of his own machines for the expedition, but Byrd bought the Bellanca. At the Sesqui meet in Phila-



delphia the Bellanca won with a total of points fifty per cent greater than its nearest competitor. Henry B. du Pont, later a director of the du Pont-Bellanca Aircraft Corporation, piloted one of the unsuccessful entries in that race and had ample reason for noting the Bellanca's superiority.

TODAY Bellanca holds forth in a brand new factory in New Castle just outside of Wilmington, the president of a successful company, capitalized at two million dollars. The sudden turn of events has aroused in him a somewhat sardonic amusement, but otherwise he is the same patient, courteous, and seemingly naïve fellow; the same genial murderer of the English language. He goes his quiet way taking things "vit philosophy," and continuing to give his life to his work.

He has no hobbies. Once in an idle moment he designed a machine for drying macaroni and gave brief thought to putting it on the market, but he thrust temptation aside and stuck to his planes. Now, after a hard day at design, he relaxes in the evening by continuing the same work. He insists on eight hours' sleep,

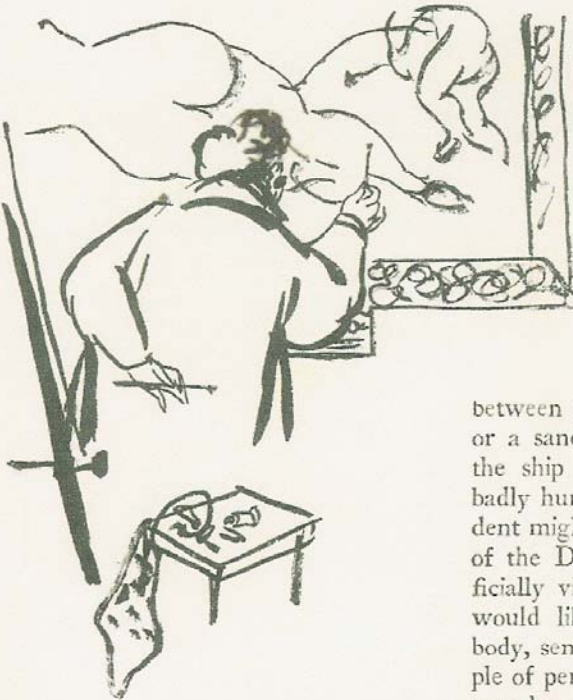


Edmund Metropolitan Museum

for during that time his subconscious seems extraordinarily alert and he frequently delegates to it some particularly troublesome problem. On waking he finds almost always that the solution is clear. He avers that he is indifferent to food and eats only to keep up his efficiency, but he has been known to devote almost as much time to the preparation of spaghetti as to the sketch of an acrofoil.

He is a naturalized citizen and in 1924 married an American girl, Dorothy Brown, whom he met at a flying meet in Omaha. They have one child, a boy, two years old. Mrs. Bellanca studied art abroad, and once when her husband was laid low by influenza she draughted a complete set of wing curves from his notes and sketches and turned out an excellent job.

Bellanca spends the day directing manufacture in his new factory, observing an occasional flight test, going resignedly into conference. Somehow he finds time to design new ships, a truly colossal task. Until recently he was not able to afford any laboratory equipment for research, but he did not seem to need any. He always neglected to ask patents on any original devices, and, profligate with ideas, he appeared flattered when the better-known designers incorporated elements



of his designs in their latest products. Recently, however, he has begun protecting his ideas.

HE is very proud of the record of safe flying his ships have made. Charlie Levine did his best to kill himself in the Columbia, but found it impossible; the ship always got him safely to the ground. When the Aero Show was held in Detroit last year the Bellanca exhibition ship was wrecked—its motor cut out at low altitude and the pilot had to choose



between landing in a crowded street or a sand pit. He chose the pit and the ship turned over. No one was badly hurt, but it was feared the accident might disturb sales. An inspector of the Department of Commerce officially viewed the wreck and said he would like to have the fuselage, or body, sent to Washington as an example of perfect construction. The news got abroad, and sales of Bellanca ships at the Aero Show were so far from being depressed that, within two days, orders were booked for fourteen planes.

—WILLIAM WEIMAR

THE SHOW-OFF

"NOW listen, Henry, you can't do a thing like that. After all, the lodge promised him a present."

"The lodge din promise him no present. The lodge promised if the member who sold th' most tickets should get a present—that's what the lodge promised."

"Well, what am I sayin'? I'm simply sayin' that th' lodge made a motion which was dooly seconded that th' member who sells the most tickets was to get a present. And Moe sold th' most tickets. Now you can't deny that, can you?"

"I'm not denyin' nothin'. All I'm sayin' is that when the motion was made and seconded Moe got up and he says, 'I promise this here lodge that I personally will be responsible for a hunard and fifty tickets.' Now din he?"

"Yeah, but—" "Showin' off, thass what he was doin'. Like at th' ball the lodge gave at Pomm Godden? Evveybody came in tuck and Moe

