



FACTS ABOUT THE
BEECH-NUT
AUTOGIRO

A FLIGHT OF THOUGHT TO A NEW ERA OF FLIGHT



IN 1918 Juan de la Cierva, a Spanish engineer, had a flight of thought that promises a new era of flight. It was after he had seen a tri-motored bombing plane he had built go into a stall near the ground, and crash. Cierva pictured in his mind an aircraft that would not stall or spin.

Fortunately Cierva was equipped with the mental and engineering skill that permitted him to translate his thought into a mathematical formula and that formula into an entirely new aircraft the "Autogiro."

Long research was necessary. Four machines were built, the last of which was successful. It was later remodeled fifteen times before the fifth Autogiro was finally declared a success in January, 1923.

Since then the development of the "Wind-mill" plane, in Europe and America, has been steady but it was not until 1931 that Autogiros were placed on the market in the United States.

The Autogiro uses freely rotating blades to support it in the air instead of the usual fixed wing surfaces of the ordinary airplane. The weight of the machine suspended under these blades owing to their design and their angular setting causes them to rotate, much like a maple seed. This rotation provides the sustentation or lift through the engagement of sufficient air.

If the engine, which propels the Autogiro forward, fails it means nothing to the blades which continue their automatic rotation opposing the pull of gravity because of their complete independence of power. The Autogiro merely settles slowly and vertically to the ground. Thus the Autogiro will not stall or spin and it can be landed safely on any fair-sized clear space.

The ease and safety of take-off and landing provided by the Autogiro promise a new era of flight.

The Beech-Nut Autogiro is one of the first in America to be used commercially. On the following page we present the answers to a few of the questions often asked about the Autogiro.

QUESTIONS AND ANSWERS ABOUT THE BEECH-NUT AUTOGIRO

What does Autogiro mean?

Autogiro means "self rotation."

What makes the rotor blades turn?

The weight suspended on them creates the proper pressure of air. They are not connected with the motor while in flight.

How are they started?

By a self-starter, which is disconnected when the Autogiro leaves the ground, and by air pressure when the Autogiro moves forward.

How fast do they turn?

At 120 revolutions a minute. The tips of the blades nearly 200 miles an hour.

How much space is needed for the Autogiro to leave the ground?

About fifteen yards in an ordinary wind. About fifty yards if there is no wind.

How much space is needed for the Autogiro to land?

The Autogiro can land vertically without moving forward at all. For smoothness in landing a run of about 15 feet is desirable.

How fast will it climb?

At 1,400 feet per minute—faster than the swiftest elevator.

How slowly does it descend?

At 14 feet per second—slower than a parachute.

Are the rotor blades flexible?

Yes. They are on hinges which permit them to flap as they turn, as the wings of a bird.

What holds the blades in position when in flight?

Centrifugal force which gives them greater strength than the rigidity of their own materials.

How fast does it fly?

From 20 to 120 miles an hour.

Is it safe to fly slowly at low altitude?

Yes. The rotor blades keep the Autogiro in the air at high or low speed and distance from the ground does not affect their lifting power.

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next smoke
taste better

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keeps the mouth fresh and
cool; sweetens the breath

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