Join the Intellectual Property Business Matching Projects

Intellectual Property Sect. Corporate Planning Dept.

Licensing drone patents intended to create new value and support other businesses

Many new patents are filed every year, but even after obtaining the rights, many patents remain unused and dormant. In Japan, there are approximately 1.6 million patents, half of which are reportedly unused, and these are held by large enterprises. The “Intellectual Property Business Matching” project connects these unused patents with small and medium-sized enterprises and startups to develop attractive products and create new businesses.

We are actively participating in this project from the perspective that combining our patents with the ideas and technologies of external personnel will lead to the creation of new value, and from the perspectives of social contribution and enhancing corporate value. We are providing drone-related patents and designs patents to platforms operated by the Ministry of Economy, Trade and Industry (Kansai Bureau of Economy, Trade and Industry), Aichi Bank, and Nikkan Kogyo Shimbun. Aisan’s drones are hybrid-powertrain and utilize engine technology cultivated through the development of automotive parts. They feature significantly longer flight ranges than electric drones. We plan to publicly disclose the drone-related patents of flight control and design patents obtained through this drone development as licensable patents*, in the hope that they will support companies considering developing or manufacturing drones or flying cars.

*Patents that the applicant intends to license to others through a license agreement, etc.

Key Points of the Licensable Patents

01

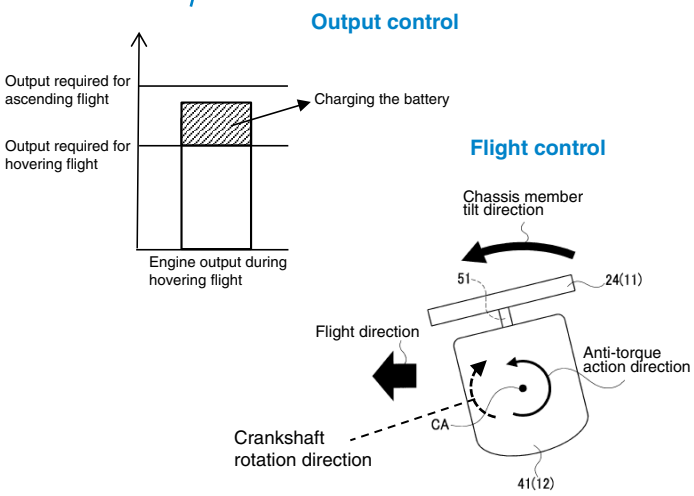
Patents related to drone control

These patents relate to output and flight control, which enables long flight times and energy efficiency.

<Technical features>

During hovering flight, the drone is driven at a predetermined output value. This value is higher than the minimum required for hovering flight, but lower than the minimum required for ascending flight. This enables long flight times by charging excess power to the battery. [Output Control]

During mobile flight, the drone’s tilt direction (traveling direction) is aligned with the direction of the anti-torque generated by the engine to achieve energy-efficient flight. [Flight Control]



<Examples of potential applications>

Hybrid drones and flying cars, which are powered by both engines and batteries.

Examples of uses

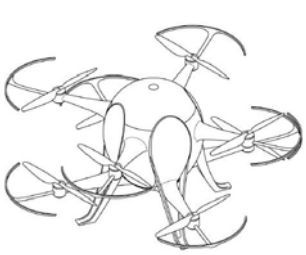
02

Design patents concerning the external appearance of the drone

The concept is “to give people a sense of reassurance and kindness,” and its design features set it apart from typical drones.

<Design patents features>

- Egg-shaped design to convey softness
- Gentle and safe transportation image, as if carrying eggs
- Curved frame design to prevent injury during use
- User-friendly height for easily handling cargo



Perspective view

Perspective view (lid open)

<Design model examples>

Results (Problem Solving)

- We have listed the patents and design patents as licensable patents on the platform of the Ministry of Economy, Trade and Industry (Kinki Bureau of Economy, Trade and Industry), Aichi Bank, and Nikkan Kogyo Shimbun.

Future Developments

- We would like to make this project available on platforms other than the ones currently provided.
- If there are requests to use the patents, we would like to actively support their commercialization.
- In the future, we would like to make technologies other than drones available as needed.