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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

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Michelle K. Lee

Deputy Director of the United States Patent and Trademark Office



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(12) **United States Patent**
Novikov-Kopp

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(54) **METHOD FOR COMPREHENSIVELY INCREASING AERODYNAMIC AND TRANSPORT CHARACTERISTICS, A WING-IN-GROUND-EFFECT CRAFT FOR CARRYING OUT SAID METHOD (VARIANTS) AND A METHOD FOR REALIZING FLIGHT**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 152 days.

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(52) **U.S. Cl.**
USPC **180/117; 180/116**

(58) **Field of Classification Search**
USPC **180/126, 116, 117, 119, 120; 114/67 A**
See application file for complete search history.

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(57) **ABSTRACT**

The group of inventions relates to aviation and to transport means having (static and dynamic) air discharge, in particular to self-stabilizing wing-in-ground-effect craft of types A, B and C. The following technical results are achieved: increased flight safety and maneuvering safety, increased load-bearing capacity and flight height in ground effect mode, reduced dimensions, improved take-off and landing characteristics, as well as amphibian characteristics and economic efficiency, increased functionality and a wider range of operational alignments, and greater ease of use and maintenance. This result is achieved by simultaneously applying the methods for generating a system of aerodynamic forces, the structural solutions and the piloting methods conceptually linked therewith which are proposed in the present group of inventions to "flying wing" or "composite wing" design layouts.

20 Claims, 22 Drawing Sheets

