Claims

1. An electric personal mobility device, comprising:

a main body including a rider-support-platform structure and a steering column coupled to the rider-support-platform structure; and

a wheel arrangement supporting the main body, the wheel arrangement having at least one front wheel and at least one rear wheel, wherein the at least one front wheel is configured to be steerable by the steering column,

wherein the rider-support-platform structure comprises

an elongate hollow housing structure enclosing an internal space partitioned to define a first and second longitudinal-internal-battery-compartments, each longitudinal-internal-battery-compartment extending lengthwise along respective longitudinal side of the elongate hollow housing and having a respective rear opening at an aft portion of the elongate hollow housing structure, and

a rear-wheel-fork fixedly extending longitudinally from the aft portion of the elongate hollow housing structure between the rear openings of the first and second longitudinal-internal-battery-compartments, the rear-wheel-fork holding the at least one rear wheel

wherein the rider-support-platform further comprises a single-rear-cover openable and closeable relative the rear openings of the first and second longitudinal-internal-battery-compartments, the single-rear-cover comprising

a first and second closure portions corresponding to the respective rear openings of the first and second longitudinal-internal-battery-compartments so as to simultaneously engage with the respective rear openings to conceal the respective rear openings when the single-rear-cover is closed and to simultaneously disengage from the respective rear openings to expose the respective rear openings when the single-rear-cover is opened.

2. The device as claimed in claim 1, wherein the single-rear-cover is pivotably coupled to the elongate hollow housing structure.

3. The device as claimed in claim 1 or 2, wherein the rider-support-platform further comprises a locking mechanism configured to releasably lock the single-rear-cover when the single-rear-cover is closed.

4. The device as claimed in claim 3, wherein the single-rear-cover further comprises a wheel-fork-engagement-face portion which abuts the rear-wheel-fork when the single-rear-cover is closed and which is displaced apart from the rear-wheel-fork when the single-rear-

cover is opened, and wherein the locking mechanism is configured to releasably lock the single-rear-cover to the rear-wheel-fork via the abutment of the wheel-fork-engagement-face portion with the rear-wheel-fork when the single rear cover is closed.

5. The device as claimed in claim any one of claims 1 to 4, wherein the internal space of the elongate hollow housing structure is further partitioned to define an axial compartment extending lengthwise along the elongate hollow housing and between the first and second longitudinal-internal-battery-compartments.

6. The device as claimed in any one of claims 1 to 5, wherein the elongate hollow housing structure comprises one or more elongate voids extending lengthwise within a ceiling panel portion, a floor panel portion, a side wall, a partitioning wall or any combination thereof.

7. The device as claimed in any one of claims 1 to 6, wherein the elongate hollow housing comprises two or more longitudinal ribs extending lengthwise along an underneath exterior surface of the elongate hollow housing structure.

8. The device as claimed in claim 7, wherein each of the two or more longitudinal ribs is aligned to a corresponding partitioning wall of the elongate hollow housing structure.

9. The device as claimed in any one of claims 1 to 8, further comprising a first elongate battery inserted in the first longitudinal-internal-battery-compartment and a second elongate battery inserted in the second longitudinal-internal-battery-compartment, each of the first and second elongate batteries comprises a first end face and a second end face, wherein the first end face of respective elongate battery comprises connecting elements.

10. The device as claimed in claim 9, wherein each of the first and second elongate batteries comprises a first lubricating member fixedly surround a first end portion of respective elongate battery and a second lubricating member fixedly surround a second end portion of the respective elongate battery.

11. The device as claimed in claim 10, wherein each of the first and second lubricating members is in the form of a sleeve and is made of self-lubricating material.

12. The device as claimed in any one of claims 9 to 11, wherein each of the first and second elongate batteries comprises a pivotable pull ring disposed on the second face of the respective elongate battery.

13. The device as claimed in any one of claims 9 to 12, wherein each of the first and second elongate batteries comprises a battery status indicator on the second face of the respective elongate battery.

14. A personal mobility device sharing system comprising the electric personal mobility device according to any one of claims 1 to 13.

15. The system as claimed in claim 14, further comprising a battery charging station configured to charge a standalone battery pack removed from the electric personal mobility device.

16. A method of operating a personal mobility device sharing system comprising providing the electric personal mobility device according to any one of claims 1 to 13.

17. The method as claimed in claim 16, further comprising performing battery charging of a standalone battery pack removed from the electric personal mobility device at a battery charging station.