Claims

1. A transmission system for an unmanned aerial vehicle in which propellers are driven by an inline four-cylinder engine, comprising:

a drive gear mounted on a crankshaft of the inline four-cylinder engine;

a driven gear mounted on a clutch shaft, meshing with the drive gear;

a bevel gear mounted on the clutch shaft and driven by a follower gear that rotates in accordance with the operation of a centrifugal clutch, driving a drive shaft perpendicular to the clutch shaft;

a base gear mounted on the drive shaft and driven by the bevel gear;

a top gear assembly comprising:

a main gear mounted on the drive shaft;

a left sub-gear meshing with the main gear;

a reverse gear meshing with the main gear; and

a right sub-gear meshing with the reverse gear;

a first bevel gear and a second bevel gear, each meshing with the left sub-gear, the first bevel gear driving a first arm and the second bevel gear driving a second arm; and

a third bevel gear and a fourth bevel gear, each meshing with the right sub-gear, the third bevel gear driving a third arm and a fourth bevel gear driving the fourth arm.

2. The unmanned aerial vehicle equipped with the transmission system according to claim 1, wherein the inline four-cylinder engine is arranged with the crankshaft positioned laterally, oriented right and left relative to an airframe.

3. The unmanned aerial vehicle equipped with the transmission system according to claim 1, wherein the inline four-cylinder engine is arranged with pistons positioned horizontally.

4. The unmanned aerial vehicle equipped with the transmission system according to claim 1, wherein an air cleaner is positioned on an upper front portion of an airframe, and a radiator is positioned on an upper rear portion of the airframe.