

CLAIMS

- Claim 1: A cleaning device, comprising:
 a main body portion comprising a first filter;
 a dust cup comprising a cup body and a cup cover, wherein the cup body is connected to the main body portion and covers an outer side of the first filter;
 and
 a dust scraping assembly, wherein at least a part of the dust scraping assembly is disposed around the outer side of the first filter, and is configured to move in a reciprocating manner along an axial direction of the first filter to scrape off dust from the first filter.
- Claim 2: The cleaning device according to claim 1, further comprising an air inlet pipe, wherein the air inlet pipe and the cup body are arranged side by side and extend in a same direction; the cup body is provided with a dust-dumping opening at an end thereof, and the cup cover closes the dust-dumping opening and is openable.
- Claim 3: The cleaning device according to claim 1 or 2, wherein the dust scraping assembly comprises a dust scraping portion, and the dust scraping portion is disposed around an outer peripheral surface of the first filter, and is configured to move in a reciprocating manner along the axial direction of the first filter to scrape off the dust.
- Claim 4: The cleaning device according to claim 3, wherein the dust scraping portion is disposed between the dust cup and the first filter, a dust compression space is defined between the dust scraping portion and a bottom wall of the dust cup, the dust scraping portion comprises a compression member extending towards an inner wall of the dust cup and adjacent to the inner wall of the dust cup, and the compression member is configured to move along the axial direction of the first filter to compress the dust in the dust compression space.
- Claim 5: The cleaning device according to claim 4, wherein the compression member comprises a first side wall and a second side wall disposed opposite to each other in a radial direction, the first side wall and the outer side of the first filter are disposed opposite to each other in a radial direction of the first filter, and the second side wall and the inner wall of the dust cup are disposed opposite to each other in the radial direction of the first filter.
- Claim 6: The cleaning device according to claim 5, wherein a dust scraping member is connected to the first side wall, and the dust scraping member extends along the axial direction of the first filter and is configured to be in

clearance fit with the outer side of the first filter; and/or

the first side wall is in clearance fit with the outer side of the first filter;
and/or

the second side wall is in clearance fit with the inner wall of the dust cup.

Claim 7: The cleaning device according to claim 3, wherein the dust scraping assembly further comprises an operating portion, the operating portion is drivably connected with the dust scraping portion, and is configured to drive the dust scraping portion to move, and at least a part of the operating portion is located outside the dust cup for manual operation.

Claim 8: The cleaning device according to claim 7, further comprising a connecting rod, and two ends of the connecting rod are respectively connected to the dust scraping portion and the operating portion, so that the operating portion is drivably connected with the dust scraping portion.

Claim 9: The cleaning device according to claim 7, wherein the dust scraping assembly further comprises:

a guide rod extending in the axial direction, with one end connected to the dust scraping portion; and

a support portion connected to the other end of the guide rod and movably supported on the main body portion,

wherein the support portion is drivably connected with the operating portion.

Claim 10: The cleaning device according to claim 9, wherein the main body portion further comprises a motor housing, a space for accommodating a motor is defined in the motor housing, the motor housing and the first filter are arranged along the axial direction, and the support portion is disposed around an outside of the motor housing.

Claim 11: The cleaning device according to claim 9, wherein the main body portion further comprises a guide portion, the guide portion is disposed between the support portion and the dust scraping portion, and the guide portion is provided with a guide hole for the guide rod to pass through and to guide movement of the guide rod in the axial direction.

Claim 12: The cleaning device according to claim 11, wherein the dust scraping assembly further comprises a spring, the spring is disposed around the guide rod, with two ends respectively abutting against the guide portion and the support portion, and the spring is configured to generate a force for driving the dust scraping assembly to move away from the cup cover.

- Claim 13: The cleaning device according to claim 7, wherein the operating portion is further configured to drive the cup cover to open; the dust cup further comprises a locking portion, one side of the cup cover is hinged with the cup body, and the other side of the cup cover is locked with the cup body through the locking portion; and the operating portion comprises an abutting portion, and the abutting portion is configured to abut against and unlock the locking portion to open the cup cover.
- Claim 14: The cleaning device according to claim 13, wherein the locking portion is rotatably connected to the dust cup, the locking portion comprises a trigger end and a lock hook, the lock hook hooks the cup cover, and the abutting portion is configured to abut against the trigger end to enable the lock hook to unlock the cup cover.
- Claim 15: The cleaning device according to claim 1, wherein the dust scraping assembly has a first position, a second position, and a third position in the axial direction, a distance between the dust scraping assembly and the cup cover gradually decreases as the dust scraping assembly moves from the first position to the second position, and to the third position, and the dust scraping assembly drives the cup cover to open at the third position, and the dust scraping assembly is configured such that damping from the first position to the second position is less than damping from the second position to the third position.
- Claim 16: The cleaning device according to claim 15, wherein the dust scraping assembly further comprises an operating portion, and the cleaning device further comprises a damping structure configured to damp movement of the operating portion from the second position to the third position.
- Claim 17: The cleaning device according to claim 7, wherein the main body portion comprises a housing, the dust scraping portion is disposed in the housing, the housing is provided with a sliding rail extending along the axial direction, and the operating portion slidably mates with the sliding rail along the axial direction.
- Claim 18: The cleaning device according to claim 17, wherein the operating portion is U-shaped and disposed around the air inlet pipe, and both ends of the operating portion are connected to and slidably mate with the housing.

Claim 19: The cleaning device according to any one of claims 3 to 18, wherein the dust scraping portion is a flexible structure and/or the dust scraping portion has bristles facing an inner wall of the dust cup; and/or

 the cleaning device further comprises a fourth filter, the fourth filter is at least partially located in the dust cup, and the dust scraping portion moves along an axial direction of the fourth filter.

Claim 20: The cleaning device according to any one of claims 3 to 18, wherein the main body portion further comprises an airflow channel; and the cleaning device further comprises:

 a driving assembly, wherein at least a part of the driving assembly is disposed in the airflow channel to drive airflow;

 a rear cover detachably covering an outlet of the airflow channel; and

 a display component mounted on the driving assembly and separated from the rear cover, the display component being configured to display information towards an outside of the rear cover;

 wherein the rear cover is configured to be detachable from the main body portion independently of the display component;

 wherein the driving assembly comprises a motor, and the display component is mounted on an air outlet side of the motor;

 wherein the display component is mounted at an end of the motor close to the outlet; or

 a mounting support is provided at the air outlet side of the motor, and the display component is mounted on the mounting support;

 wherein the driving assembly further comprises:

 a third filter disposed at the air outlet side of the motor and located at the outlet of the airflow channel, the display component being mounted on the third filter.