heat is also discharged outward from the dryer at the same time. This causes a problem in that drying efficiency is lowered and an indoor environment having the clothes dryer installed therein is degraded.

[0008]

The external air is introduced into the dryer via filter 113 disposed on the front surface of outer housing 100. On the other hand, the hot air inside rotary drum 101 is discharged outward from the dryer after passing through filter 119 disposed in the rear portion of rotary drum 101. Therefore, two filters are respectively present in mutually different places. Consequently, a user has to clean each of the two places.

Citation List

Patent Literature

[0009]

PTL 1: Japanese Patent Unexamined Publication No. 53-143068

SUMMARY

[0010]

The present disclosure is made in order to solve the above-described problem, and aims to provide a clothes dryer which improves drying efficiency of the clothes dryer, comfortably maintains an environment having the clothes dryer installed therein, and simultaneously improves workability of cleaning a lint filter.

[0011]

Specifically, according to an exemplary embodiment of the present disclosure, there is provided a clothes dryer including a main body, a rotary drum disposed inside the main body so as to be rotatable, an air suction port configured to open inward of the main body through which drying air is fetched, an air suction route that

supplies the drying air into the rotary drum from the air suction port, a filter part detachably disposed inside the air suction route collecting foreign substances; a regulating unit disposed inside the air suction route and regulating the drying air;

a heating unit that is disposed on the air suction route so as to heat the drying air, an air supply unit that is disposed on the air suction route so as to supply the drying air into the rotary drum, an air discharge port through which the drying air is discharged, an air discharge route that supplies the drying air which dried clothes inside the rotary drum to the air discharge port, and a control unit that controls the air supply unit and the heating unit. The clothes dryer is configured to further have a heat exchange unit that enables heat exchange of the drying air passing through the air suction route and the air discharge route.

[0012]

According to this configuration, heat wasted together with discharged air is recovered by sucked air. Accordingly, drying efficiency can be improved. The heat discharged outward from the clothes dryer is restrained. Accordingly, it is possible to minimize possibilities that an environment having the installed clothes dryer is degraded due to the waste heat.

[0013]

In the clothes dryer according to the exemplary embodiment of the present invention, the air suction port may be configured to open inward of the main body. In this manner, warmer air is sucked into the main body, and it is possible to restrain large foreign substances from entering the air suction route from the outside of the clothes dryer.

[0014]

The clothes dryer according to the exemplary embodiment of the present invention may further include a first lint filter unit for collecting foreign substances. The first lint filter unit may have a first suction unit disposed on the air suction route and a first discharge unit disposed on

CLAIMS

1. A clothes dryer comprising:

a main body;

a rotary drum disposed inside the main body so as to be rotatable;

an air suction port configured to open inward of the main body through which drying air is fetched;

an air suction route that supplies the drying air into the rotary drum from the air suction port;

a filter part detachably disposed inside the air suction route collecting foreign substances;

a regulating unit disposed inside the air suction route and regulating the drying air;

a heating unit disposed inside the air suction route and heating the drying air;

an air supply unit disposed inside the air suction route and supplying the drying air into the rotary drum;

an air discharge port disposed to be open outward of the main body;

an air discharge route that supplies the drying air which dried clothes inside the rotary drum to the air discharge port; and

a control unit that controls the air supply unit and the heating unit,

wherein the air suction port, the filter part, the regulating unit, the heating unit and the air supply unit are arranged in this order from an upstream side in the air suction route

the filter part and the regulating unit are adjacently disposed.

and the regulating unit and the heating unit are adjacently disposed.

2. The clothes dryer according to any one of Claim 1 , further comprising:

a heater regulating plate is disposed in the heating unit, and the heating unit divides an air passage into a first air passage which passes through the heating unit and an other air passage which does not pass through the heating unit and passes directly through the air supply unit.

3. The clothes dryer according to any one of Claim 1 to Claim 3, wherein

the filter part is disposed so as to be detachable, and the regulating unit is configured by a plurality of areas.