

Abstract:

Apparatus and method for producing nanofiber

An object of the present invention is to provide an apparatus and method for producing a nanofiber by using a melt blown method improving productivity.

A pellet-shaped raw material (resin) fed into a hopper 2 is supplied and melted in a heating cylinder 3 heated by a heater 4, and sent to a front part of the heating cylinder 3 by a screw 5 rotated by a motor 6. The heating cylinder 3 is provided with a head portion 7, and a high-pressure gas is ejected from the gas ejection hole 71 provided at a center of the head portion 7. The molten resin sent to an end of the heating cylinder 3 is discharged from a resin discharge hole 73 having six superfine tubes provided in a downstream side of the resin ejection hole 73 through inside of the head portion 7. The molten resin discharged from the resin discharge hole 73 is elongated and a fiber having nanometer-order diameter can be formed.

Fig. 4