# CLAIMS

Claim 1

A mounting apparatus having a mounting head, and a head driving section adapted to move the mounting head, the mounting head comprising:

a head section;

a solenoid;

a plunger which acts as a movable iron core of the solenoid, and protruding downward from the head driving section in the normal attitude of operation of the mounting apparatus; and

a pin coaxial with and inserted into the plunger, the pin being capable of reciprocating motion relative to the plunger,

the plunger has a front end part and a shaft part,

the front end part of the plunger tapering towards a nipple part formed as a tip end of the front end part of the plunger,

the front end part and the nipple part protruding downward from the head section,

wherein the plunger protrudes downward most from the head section when the solenoid is not actuated, and;

wherein the pin protrudes downward relative to the plunger in a state where the plunger moves upward upon actuation of the solenoid.

Claim 2

The mounting apparatus according to claim 1, in which the mounting head further comprises a spring provided in the head section to bias the plunger into protruding downward most when the solenoid is not actuated, and when in this state;

the front end of the pin is located in the same plane as the front end of the plunger.

Claim 3

The mounting apparatus according to claim 1 or claim 2,

wherein the pin has a pin-front end part, a pin-shaft part, and a pin-rear end part,wherein a;

diameter of the pin-rear end part is greater than a diameter of the pin-shaft part, and the pin-rear end par is fixed to the head section.

Claim 4

The mounting apparatus according to claim 3,

wherein the pin-front end part is extended from the pin-shaft part, and is formed into a funnel shape, and;

wherein the pin-front end part is adapted to pierce through a sheet in a state when the solenoid is actuated.

Claim 5

The mounting apparatus according to claim 1 or claim 2,

wherein the mounting head is attached to a slider of a vertical driving unit of the head driving section.