WHAT IS CLAIMED IS:

1. A processing apparatus comprising:

a chuck table configured to hold a workpiece thereon;

processing means for processing the workpiece held on the chuck table;

cassette receiving means for receiving a cassette placed thereon and having a plurality of workpieces accommodated therein;

unloading and loading means for unloading and loading a workpiece from and to the cassette placed on the cassette receiving means;

temporary receiving means for temporarily receiving thereon the workpiece unloaded by the unloading and loading means;

workpiece transport means for transporting the workpiece temporarily placed on the temporary receiving means to the chuck table; and

a controller;

wherein the temporary receiving means includes

a first support rail having a first bottom wall and a first side wall for guiding a workpiece for sliding movement in unloading and loading directions of the workpiece by the unloading and loading means,

a second support rail disposed in an

opposing relationship to the first support rail and having a second bottom wall and a second side wall for guiding a workpiece for sliding movement,

support rail actuation means for actuating the first support rail and the second support rail in directions in which the first support rail and the second support rail approach each other and are spaced away from each other, and

load detection means for detecting a load on the support rail actuation means, and

the controller is operable to receive, as an input thereto, a load signal from the load detection means when the support rail actuation means is actuated to move the first support rail and the second support rail so as to approach each other thereby to sandwich a workpiece between the first side wall and the second side wall and actuate, when a load value from the load detection means reaches a given value, the support rail actuation means so as to move the first support rail and the second support rail in the directions in which the first support rail and the second support rail are spaced away from each other by a given amount.

2. The processing apparatus according to claim 1, wherein the workpiece is a wafer having a surface having a plurality of regions partitioned by a plurality of

scheduled division lines and devices formed in the regions, and the wafer is stuck to a surface of a dicing tape having an outer peripheral portion mounted such that a rear face thereof covers an inner side opening portion of an annular frame.

3. The processing apparatus according to claim 1, wherein image pickup means for picking up an image of the workpiece temporarily placed on the first support rail and the second support rail is disposed on an upper side of the temporary receiving means, and the image pickup means picks up an image of a processed state of the workpiece which moves along the first support rail and the second support rail when the processed workpiece is to be accommodated into the cassette placed on the cassette receiving means by the unloading and loading means.