CLAIMS

1. A packing mat comprising: an outer bag, an inner bag, and cushion beads, wherein

the outer bag is an airtight bag that stores the inner bag, and has a valve,

the valve is a combination of a check valve and an air intake valve,

the check valve opens when a suction force is applied thereto when deaerating the inside of the outer bag, and after the deaeration, closes to block introduction of the outside air into the outer bag,

the air intake valve is opened by a manual operation to introduce the outside air into the deaerated inside of the outer bag,

the inner bag is a stretchable air-permeable bag, and has junction points on upper and lower sheet surfaces forming the bag,

the junction points are portions at which the upper and lower sheet surfaces are joined integrally in minute ranges at regular intervals in the longitudinal and lateral directions across the entire upper and lower sheet surfaces of the inner bag, scattered onto flattened surfaces of the inner bag, and form the sections to confine the cushion beads, the cushion beads are granular bodies having shock-absorbing characteristics, and the cushion beads are filled in the inner bag and a fixed amount of cushion beads is substantially confined in the sections each of which connects several junction points, the inner bag filled with the cushion beads becomes a flat buffer layer with a substantially fixed thickness, and inserted in the outer bag.

2. The packing mat according to Claim 1, wherein the respective junction points are scattered to the respective positions so that the positions deviate from each other longitudinally and laterally on a column to column basis in a matrix with the flattened surfaces of the inner bag, the sections surrounded by four junction points adjacent to each other have a structural body that is substantially independent to

substantially confine the cushion beads in each section connecting the respective junction points.

3. The packing mat according to Claim 1, wherein the sheets of the inner bag are a three-dimensional knit composed of a front knit fabric and a back knit fabric knitted with fiber yarns, and a connecting yarn that connects the knit fabrics.

4. The packing mat according to Claim 1, wherein the cushion beads are pneumatically fed by high-pressure air from an opening provided at a portion of the inner bag and enclosed evenly in sections of each connecting the respective junction points.

5. ~~the~~ The packing mat according to any one of Claims 1, 2, 3, and 4, where the packing mat is combined with a cover sheet, wherein the packing mat is layered on the sheet surface of the cover sheet while leaving a portion that serves as a flap of the cover sheet, and the mat is joined to the cover sheet integrally, the cover sheet is half-folded in the inner side to exposed surface of the packing mat, and both side edges are joined or sealed so as to become openable and closable, ~~Accordingly,~~wherein the combination of the packing mat, and the half-folded cover sheet ~~of the half-folded to~~ forms the bag, and the flap of the cover sheet becomes a lid that closes ~~the~~ an opening of the bag.

CLAIMS

1. A packing mat comprising: an outer bag, an inner bag, and cushion beads, wherein

the outer bag is an airtight bag that stores the inner bag, and has a valve,

the valve is a combination of a check valve and an air intake valve,

the check valve opens when a suction force is applied thereto when deaerating the inside of the outer bag, and after the deaeration, closes to block introduction of the outside air into the outer bag,

the air intake valve is opened by a manual operation to introduce the outside air into the deaerated inside of the outer bag,

the inner bag is a stretchable air-permeable bag, and has junction points on upper and lower sheet surfaces forming the bag,

the junction points are portions at which the upper and lower sheet surfaces are joined integrally in minute ranges at regular intervals in the longitudinal and lateral directions across the entire upper and lower sheet surfaces of the inner bag, scattered onto flattened surfaces of the inner bag, and form the sections to confine the cushion beads, the cushion beads are granular bodies having shock-absorbing characteristics, and the cushion beads are filled in the inner bag and a fixed amount of cushion beads is substantially confined in the sections each of which connects several junction points, the inner bag filled with the cushion beads becomes a flat buffer layer with a substantially fixed thickness, and inserted in the outer bag.

2. The packing mat according to Claim 1, wherein the respective junction points are scattered to the respective positions so that the positions deviate from each other longitudinally and laterally on a column to column basis in a matrix with the flattened surfaces of the inner bag, the sections surrounded by four junction points adjacent to each other have a structural body that is substantially independent to

substantially confine the cushion beads in each section connecting the respective junction points.

3. The packing mat according to Claim 1, wherein the sheets of the inner bag are a three-dimensional knit composed of a front knit fabric and a back knit fabric knitted with fiber yarns, and a connecting yarn that connects the knit fabrics.

4. The packing mat according to Claim 1, wherein the cushion beads are pneumatically fed by high-pressure air from an opening provided at a portion of the inner bag and enclosed evenly in sections of each connecting the respective junction points.

5. The packing mat according to any one of Claims 1, 2, 3, and 4, where the packing mat is combined with a cover sheet, wherein the packing mat is layered on the sheet surface of the cover sheet while leaving a portion that serves as a flap of the cover sheet, and the mat is joined to the cover sheet integrally, the cover sheet is half-folded in the inner side to exposed surface of the packing mat, and both side edges are joined or sealed so as to become openable and closable, wherein the combination of the packing mat, and the half-folded cover sheet forms the bag, and the flap of the cover sheet becomes a lid that closes an opening of the bag.