CLAIMS

1. A ~~corrugated paperboard~~ pallet produced from two flat blanks of corrugated paperboard which comprise a pallet top and a pallet bottom;

said blanks are each folded to produce only two parallel vertically extending double thickness ribs, three horizontal panels, two vertical side walls and two horizontal flaps;

in each of said blanks, one of said horizontal panels lies between said ribs and the other two horizontal panels lie on opposite sides of said two ribs, respectively;

said vertical side walls of each said blank are attached to outer edges of said other two horizontal panels;

said horizontal flaps on each blank are attached to distal ends of said vertical side walls, respectively;

said ribs of said pallet top and said pallet bottom lock each other from opening in the center of the pallet by intersecting perpendicularly with notches;

said horizontal flaps lock said ribs from opening at the edges of said pallet by intersecting said ribs perpendicularly with notches in said horizontal flaps, and said vertical side walls comprise vertical flaps~~.~~, each having one end attached to said side walls and an opposite end free, and top and bottom edges cut so said flaps can ~~that~~ open inward defining fork passages whereby said vertical flaps engage inner surfaces of one or both of said pallet top and bottom to lock said horizontal flaps from opening.

2. A ~~corrugated paperboard~~ pallet as defined in claim 1 wherein:

said vertical flaps of said side walls provide transfer of load between the said pallet bottom and said pallet top.

3. A ~~corrugated paperboard~~ pallet as defined in claim 2 wherein:

said pallet top and said pallet bottom each have a non-crushed total flute thickness of greater than 5.6 mm and each of said pallet top and said pallet bottom has an outside width ~~of~~ between said ribs that is greater than 1/8th the outside width ~~of~~ between their respective side walls.

4. A ~~corrugated paperboard~~ pallet as defined in claim 3 wherein:

adjacent panels of said three horizontal panels of said pallet top and said pallet bottom abut each other without overlapping and said ribs are locked free of adhesive.

5. A ~~corrugated paperboard~~ pallet as defined in claim 1 wherein:

corners of said horizontal flaps overlap said horizontal panels and lock into outer horizontal surfaces of said pallet.

6. A corrugated paperboard pallet as defined in claim 1 wherein:

~~the cross machine direction of the corrugation of~~ said pallet top and said pallet bottom each have a cross machine direction of the corrugations in said corrugated paperboard, which ~~is~~ are perpendicular to the direction of their respective ribs.

7. A ~~corrugated paperboard~~ pallet as defined in claim 6 wherein:

a portion of said horizontal flaps overlap portions of said horizontal panels and lock into outer horizontal surfaces of said pallet.

8. A ~~corrugated paperboard~~ pallet produced from two flat blanks of corrugated material which comprise a pallet top and a pallet bottom;

said blanks are each folded to produce ~~only~~ no more than two ~~parallel~~ vertically extending double thickness ribs attached to ~~,~~ no more than three horizontal panels, two vertical side walls attached to said horizontal panels on opposite sides of said pallet, and two horizontal flaps attached to distal ends of said side walls;

said ribs of said pallet top and said pallet bottom extend perpendicularly to each other, respectively, and each have notches which engage and lock each other from opening in the center of ~~the~~ said pallet ~~by intersecting perpendicularly with notches~~;

said horizontal flaps are folded and tucked into interior spaces on opposite sides of said pallet and have notches that engage base portions of said double thickness ribs to lock said ribs from opening at ~~the~~ edges of said pallet ~~by intersecting perpendicularly with notches~~, and a portion of said horizontal flaps fold over and overlap portions of said horizontal panels and lock into outer horizontal surfaces of said pallet.

9. A ~~corrugated paperboard~~ pallet as defined in claim 8 wherein:

said vertical side walls comprise vertical flaps that open inward defining fork passages whereby said vertical flaps lock said horizontal flaps from opening.

10. A ~~corrugated paperboard~~ pallet as defined in claim 9 wherein:

said vertical flaps of said side walls provide transfer of load between the said pallet bottom and said pallet top.

11. A ~~corrugated paperboard~~ pallet as defined in claim 8 wherein:

said pallet includes two double thickness ribs folded from each pallet blank, and three horizontal panels, wherein adjacent panels of said three horizontal panels of said pallet top and said pallet bottom abut each other without overlapping and said ribs are locked in folded position ~~without~~ free of ~~the use of~~ adhesive.

12. A ~~corrugated paperboard~~ pallet as defined in claim 8 wherein:

~~the~~ said corrugated material has a cross machine direction of the corrugation of said pallet top and said pallet bottom which is perpendicular to the direction of their respective ribs.

13. A ~~corrugated paperboard~~ pallet as defined in claim 12 wherein:

said pallet top and said pallet bottom each have a non-crushed total flute thickness of greater than 5.6 mm and each of said pallet top and said pallet bottom has two ribs folded therefrom positioned such that an outside width ~~of~~ between said ribs ~~that~~ is greater than 1/8th the outside width ~~of~~ between their respective side walls.

14. A ~~corrugated paperboard~~ pallet produced from two flat corrugated paperboard blanks which comprise a pallet top and a pallet bottom;

said blanks are each folded to produce only two parallel vertically extending double thickness ribs, with the ribs on one blank lying perpendicular to the ribs on the other blank, said blanks are each folded to produce one horizontal panel between said ribs and two ~~three~~ horizontal panels, one each on each of opposite sides of said ribs, and two vertical side walls, one each attached to each of said two horizontal panels and spaced an outside width apart, and two horizontal flaps on distal ends of said side walls;

said ribs of said pallet top and said pallet bottom each have vertically opening notches which lock each ~~other~~ rib from opening in the center of the pallet by when said notches are nested ~~intersecting~~ perpendicularly with ~~notches~~each other ;

said horizontal flaps have notches which lock said ribs from opening at the edges of said pallet by intersecting ~~perpendicularly~~ said ribs with said notches, and said pallet top and said pallet bottom each have a non-crushed total flute thickness of greater than 5.6 mm and each of said pallet top and said pallet bottom has an outside width ~~of~~ between said ribs that is greater than 1/8th ~~the~~ said outside width ~~of~~ between their respective side walls.

15. A ~~corrugated paperboard~~ pallet as defined in claim 14 wherein:

said pallet top and said pallet bottom each have a cross machine direction of the corrugation of said pallet top and said pallet bottom, which is perpendicular to the direction of their respective ribs.

16. A ~~corrugated paperboard~~ pallet as defined in claim 15 wherein:

said vertical side walls comprise vertical flaps attached at one edge that ~~open~~ swing inward defining fork passages, whereby said vertical flaps are dimensioned so as to engage inside surfaces of said pallet top and said pallet bottom to lock said horizontal flaps from opening.

17. A ~~corrugated paperboard~~ pallet as defined in claim 16 wherein:

said vertical flaps of said side walls provide transfer of load between the said pallet bottom and said pallet top.

18. A ~~corrugated paperboard~~ pallet as defined in claim 14 wherein:

a portion of said horizontal flaps overlaps portions of said horizontal panels and lock into outer horizontal surfaces of said pallet.

19. A ~~corrugated paperboard~~ pallet as defined in claim 18 wherein:

the corners of said horizontal flaps overlap portions of said horizontal panels and lock into outer horizontal surfaces of said pallet.

20. A ~~corrugated paperboard~~ pallet as defined in claim 14 wherein:

adjacent panels of said three horizontal panels of said pallet top and said pallet bottom abut each other without overlapping and said ribs are locked without the use of adhesive.

21. A ~~corrugated paperboard~~ pallet produced from ~~two~~ first and second flat corrugated paperboard blanks which comprise a pallet top and a pallet bottom, comprising:

said blanks are folded to produce vertically extending double thickness ribs numbering no more than two on each blank, and two vertical side walls spaced an outside width apart, and two horizontal flaps attached to distal ends of said side walls;

said double thickness ribs on said first and second blank lying perpendicular to each other;

portions of each of said blanks engaging the other of said blanks to form geometrical mechanical locks that hold said pallet top and said pallet bottom in an integral locked-together pallet; with said ribs and said side walls providing locked support for loads on said pallet top

at least some of said locks arranged in series of at least three locks, such that a first lock is in turn locked against disengaging by a second lock, and the second lock is in turn locked against disengaging by a third lock, and disassembly could occur only in a reverse sequence.

22. A corrugated paperboard pallet produced from two flat blanks which comprise a pallet top and a pallet bottom;

said blanks are each folded together to produce said pallet ~~whereby~~ wherein folds on each pallet blank include double thickness ribs and two side walls that are locked from ~~opening~~ unfolding by serial geometric mechanical locks having a series of greater than two;

wherein on each blank said double thickness ribs are held in folded position by a first lock, and said two side walls are held in folded position by a second lock which also holds said first lock in locking position.

23. A corrugated paperboard pallet as defined in claim 22 wherein:

said blanks are each folded to produce only two parallel vertically extending double thickness ribs, three horizontal panels attached to said ribs, two vertical side walls attached to

said panels, and two horizontal flaps attached to said side walls;

said serial geometric mechanical locks including 1) corner straps that lock said top and bottom blanks in a fixed spaced position relative to each other, and 2) notches on a center portion of ribs folded from said top and bottom blanks and intersecting perpendicularly, with said notches of said top and bottom ribs engaged with each other, and 3) said pallet top and bottom, said ribs lying perpendicular to each other and said notches engaged with each other to hold said ribs from opening.

24. A pallet as defined in claim 21, wherein

said first lock includes first portions of one pallet blank which extend into an interior space of said pallet and engage base parts of a double-thickness rib formed in the other pallet blank to hold said rib closed against opening and spreading out flat;

said second lock includes second portions of said one pallet blank which extend into said interior space of said pallet and jam said first portions in place and prevent said first portion from dislodging form its position locking said ribs closed;

said third lock including portions of said top blank that lock into said pallet bottom to lock said pallet top and said pallet bottom tightly in a fixed spaced-apart position to hold said second portions in position against from retracting from the locking position thereof and allowing said first lock to open.