March 20, 1956 B. C. COIT, JR 2,738,940

CONTAINER BASE

Filed Dec. 3, 1953 3 Sheets-Sheet 1

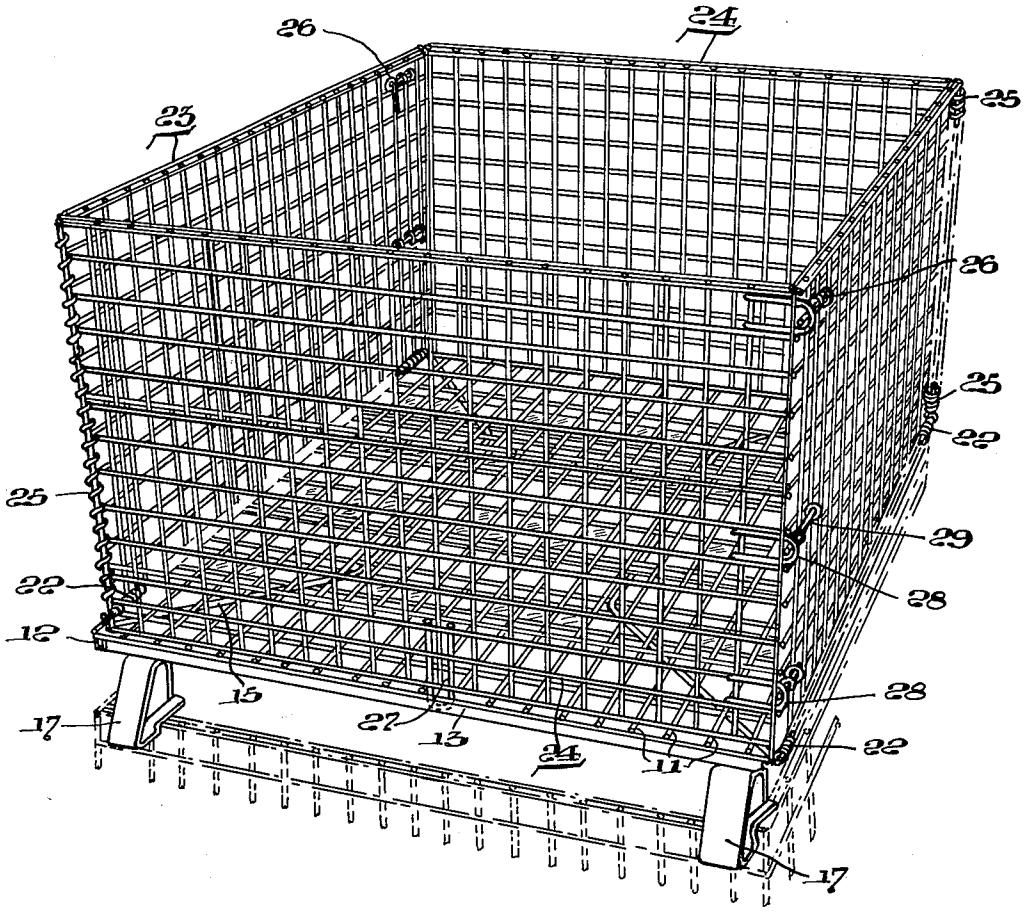


Fig. 1.

INVENTOR.
BURTON C. COIT, JR.
BY Archibald Martin
his ATTORNEY

March 20, 1956 B. C. COIT, JR 2,738,940

CONTAINER BASE

Filed Dec. 3, 1953 3 Sheets-Sheet 2

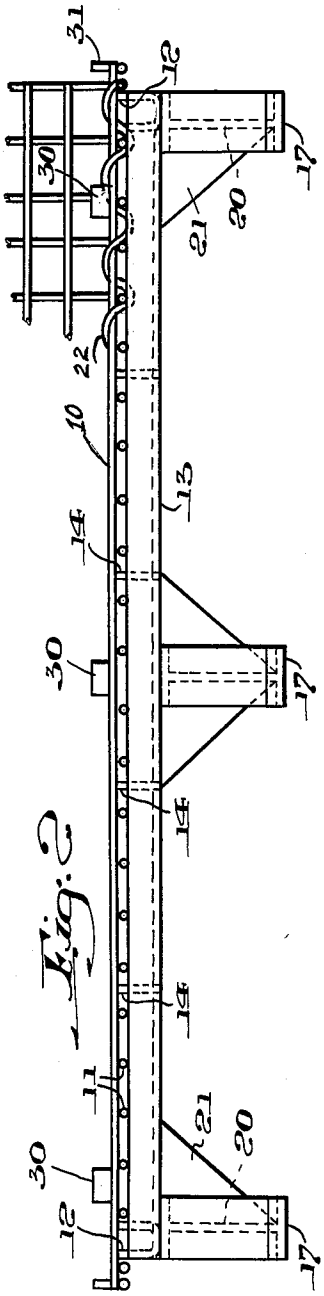


Fig. 2

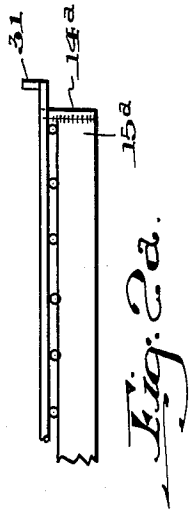


Fig. 2a.

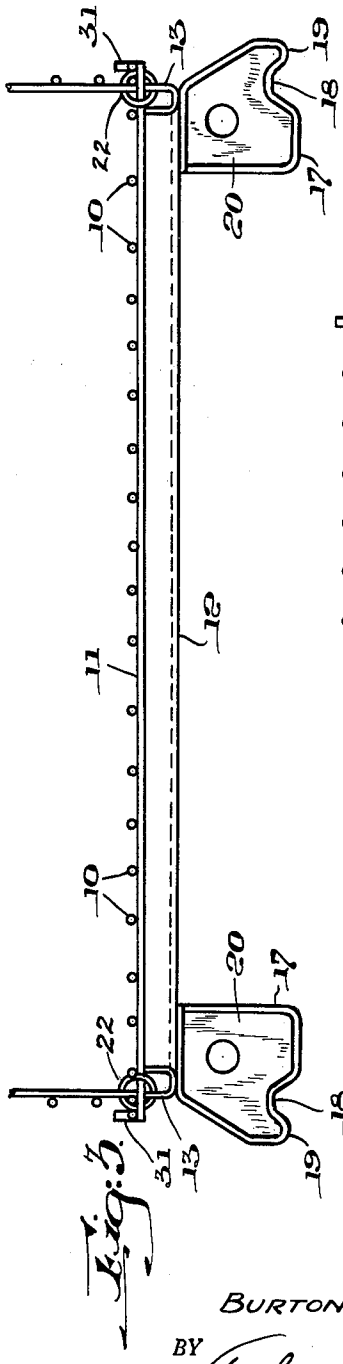


Fig. 3

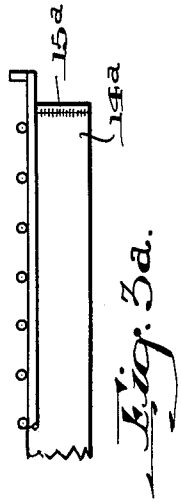


Fig. 3a.

INVENTOR.
BURTON C. COIT, JR.
BY Archworth Martin
his ATTORNEY.

March 20, 1956 B. C. COIT, JR 2,738,940

CONTAINER BASE

Filed Dec. 3, 1953 3 Sheets-Sheet 3

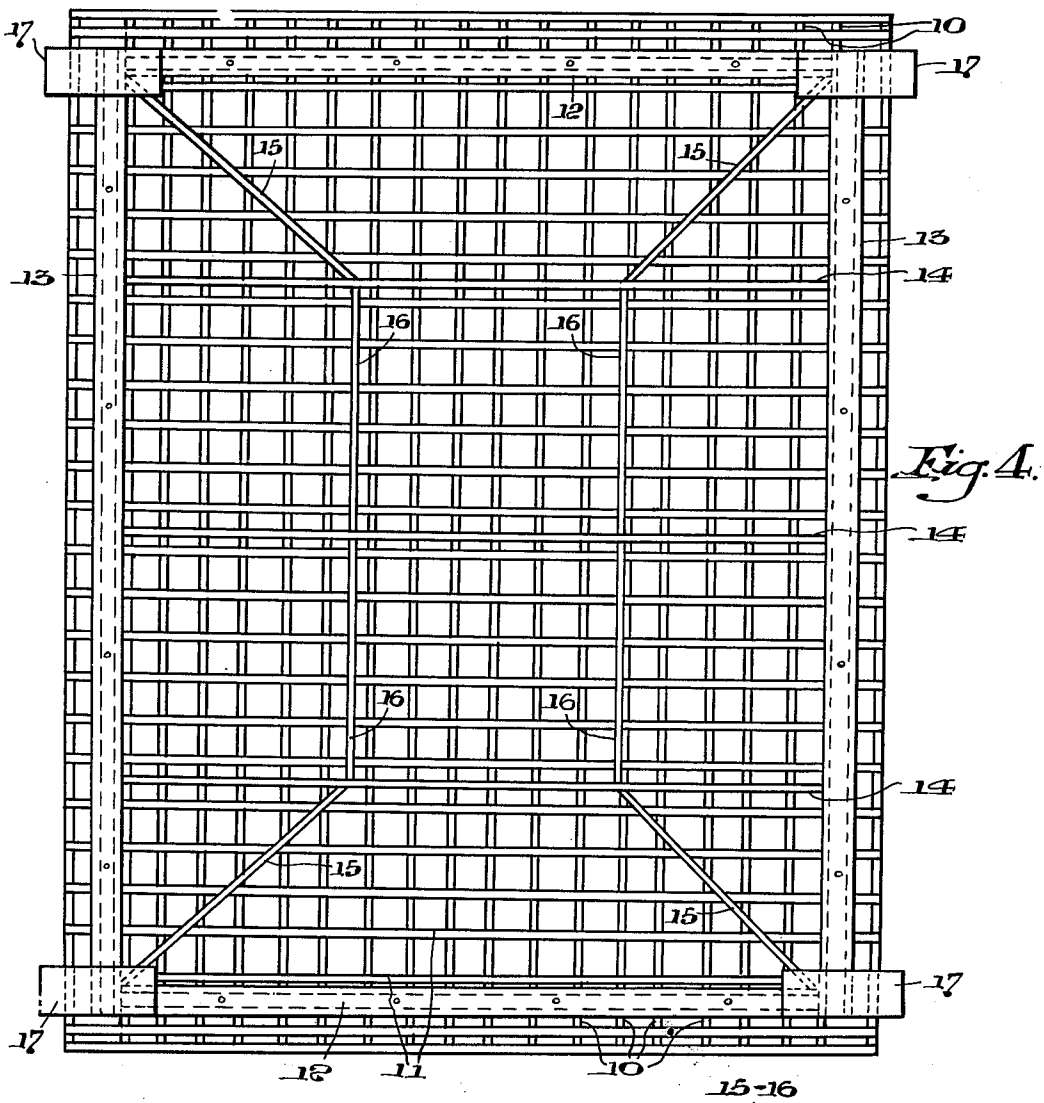


Fig. 4.

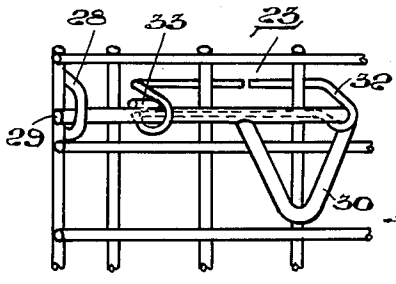


Fig. 7.

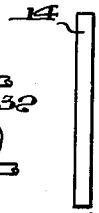


Fig. 8.

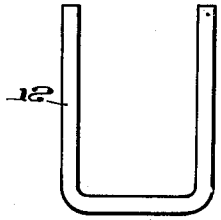


Fig. 6.



Fig. 9.

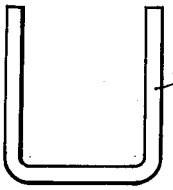


Fig. 5.

INVENTOR.
BURTON C. COIT, JR.
BY Cushwood & Martin
his ATTORNEY

United States Patent Office 2,738,940 Patented Mar. 20, 1956

2,738,940

CONTAINER BASE

Burton C. Coit, Jr., Washington, Pa., assignor to Tri-State Engineering Company, Washington, Pa., a corporation of Maryland

Application December 3, 1953, Serial No. 395,982

7 Claims. (Cl. 248—120)

This invention relates to a container of the crate type and includes a base therefor of pallet-like form whereby the crate can be transported and stacked by lift trucks such as those of the lift fork type. The base is of pallet-like form and may be used either with or without crate side walls, in which latter case the deck of the base will serve as the bottom wall of the crate. This application is a modification of and an improvement of my application Serial No. 301,525, filed July 29, 1952.

One object of my invention is to provide a container of the character referred to wherein the base is of such structure that it is highly resistant to bending or distorting under superimposed loads, even though it is supported by feet or legs only at its four corners.

Another object of my invention is to provide a structure wherein the deck of the container base is of welded mesh form, with reinforcing bars or frame members variously welded directly to the rods of the welded mesh deck, and wherein the lowermost edges of the frame members are in a common plane, to facilitate insertion of the forks of lifting trucks beneath the container.

A further object of my invention is to provide improved retaining members for preventing displacement of the vertical walls of the mesh from the deck.

Still another object of my invention is to provide a container having a base of such form that each container and base can accurately and conveniently be positioned upon other crates, into partially interlocking relation therewith, whereby the upper crates will be held against sliding on the lower crates and wherein vertical walls of the crates will be more adequately supported by the base frames against superimposed loads than in the case of various other forms of bases.

As shown in the accompanying drawings,

Figure 1 is a perspective view of a crate embodying my invention showing its base stacked upon another crate, at one corner;

Fig. 2 is an end view of the base of Fig. 1, on an enlarged scale;

Fig. 2*a* is a fragmentary view showing a modification of one corner of Fig. 2;

Fig. 3 is a side view thereof;

Fig. 3*a* is a fragmentary view showing a modification of one corner of Fig. 3;

Fig. 4 is an inverted plan view of the base of Figs. 1 to 3;

Figs. 5 and 6 are end views of the channel frame members of the base;

Fig. 7 is an enlarged detailed view of one of the latches for the container sides, and

Figs. 8 and 9 are enlarged end views of certain of the frame members.

The base shown more clearly in Figs. 2, 3 and 4 serves as a bottom for the crate, and is in the nature of a pallet which may be lifted and transported by fork-lift trucks and the like.

The base comprises wires or rods **10** welded in crossed relation to rods **11**, to form a lattice-like bottom for the

crate. Frame members **12** of channel form are welded to the rods **10**, along lines between adjacent rods **11**, while channel members **13** are welded to the undersides of the wires **11** and at their ends are welded to the channels **12**. The channels **13** are of somewhat lesser depth than the channels **12**, so that the lower surfaces of these various channels will lie in a common plane.

The members **12—13** form a rectangular framework disposed adjacent to the marginal edges of the mesh **10—11**. That area of the deck within this rectangular frame is stiffened and reinforced by brace bars **14**, **15** and **16** shown more clearly in Figs. 4, 8 and 9, the bars **14** extending crosswise of the deck and being welded at their ends to the channels **13**. The bars **16** bridge the spaces between the bars **14** and are welded at their ends thereto, while the bars **15** extend diagonally from the bars **14** to the channels **12** and **13** at the corners of the deck and are welded thereto. All of the bars **14**, **15** and **16** are welded to the underface of the mesh **11—12**.

Feet **17** are welded to the channels **12—13** at the corners of the deck and each leg has a depression or upwardly-disposed offset recess **18** therein and a toe portion **19** to facilitate stacking of the base on another crate as shown in Fig. 1. A web-like stiffener **20** is disposed within each foot and is welded thereto, and gusset plates **21** are provided at the legs, for greater strength.

For the smaller size container and where they are not needed for heavy loads, the flat bars **14***a* and **15***a* may be used instead of the rectangularly-arranged channel members **12** and **13**, as shown more clearly in Figs. 2*a* and 3*a*.

All of the frame members **12—13—14—15—16** or **12—13—14***a*—**15***a*—**14—15—16**, as the case may be, are of but two different depths as shown in Figs. 5, 6, 8 and 9, the shallower ones being welded to the lower deck wires and the deeper ones welded to the upper deck wires, so that not only are both sets of deck wires directly supported, but the lowermost edges of the frame members all occupy a common plane, so that arms of lift fork trucks can more readily be inserted beneath the container.

The vertical walls of the crate are of lattice or mesh-like form, the side walls being hinged to the deck by helical wires **22** that connect the walls to the adjacent marginal wires of the deck. The oppositely-disposed side walls **23** are hingedly connected to the end walls **24** at diagonally-opposite corners of the deck by helical wires **25**. At the other diagonally-opposite corners of the crate, the vertical walls are detachably connected by latches **26** shown more clearly in Fig. 7. The end walls **24** have the loop-like extensions **27** welded thereto near their mid portions that extend through the deck mesh so as to hold the mid portions of these walls from bulging under contained loads. At their vertical free edges, the walls **24** have loop-like members **28** welded thereto in position to extend through the mesh openings in the walls **23**, for engagement by slide bolts **29**.

Each of the bolts **29** has a handle portion **30** formed thereon for convenient manipulation thereof and also serving as a weighted element to hold the bolt against accidental disengagement from the loop **28**. A guide **32** of bent-loop form is welded to the inner face of the side walls **22** and its looped ends are bent outwardly to receive the bolt **29** which is slidable therein. When the bolt is latched with the keeper **28** as shown in Fig. 7, the weighty handle portion **30** of the bolt will hang downwardly so as to bring a stud **33** that is welded to the bolt into abutting engagement with the adjacent leg of the guide **32**. The bolt therefore is not in serious danger of becoming accidentally disengaged from the keeper. When the member **30** is lifted, the retaining stud **33** will, of course, be rocked to a point at which it can be slid rearwardly in the guide **32**.

As shown more clearly in Figs. 2 and 3, lugs **30** are

welded to the marginal deck wires **10** so as to prevent displacement of the vertical walls from the deck, as by bulging under internal load pressures when the container walls are in an upright position. The side walls are thus supported directly by the deck at all times. Also, the lugs **31** restrain endwise movement of the side walls.

I claim as my invention:

1. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods welded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck, that comprises bars welded in crosswise position to the undersides of the lower series of rods, adjacent to the longitudinal edges of the deck sheet, bars disposed between rods of said lower series, adjacent to the ends of the deck sheet and welded to the undersides of the upper series of rods, and also welded to the other bars at points adjacent to the corners of the deck, brace bars welded to the undersides of the upper series of rods and at their ends to the sides of those bars that are welded to the lower series of rods, other brace bars disposed angularly of the first-named brace bars and welded thereto at their ends and to the under sides of the lower series of rods, and legs welded to some of the bars at the corners of the deck frame, all of the said bars being of such vertical dimension that their lower faces occupy a common plane.

2. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods welded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck, that comprises bars welded in crosswise position to the undersides of the lower series of rods, adjacent to the longitudinal edges of the deck sheet, bars disposed between rods of said lower series, adjacent to the ends of the deck sheet and welded to the undersides of the upper series of rods, and also welded to the other bars at points adjacent to the corners of the deck, brace bars welded to the undersides of the upper series of rods and at their ends to the sides of those bars that are welded to the lower series of rods, other brace bars disposed angularly of the first-named brace bars and welded thereto at their ends and to the undersides of the lower series of rods, and legs welded to some of the bars at the corners of the deck frame, all of the said bars being of such vertical dimension that their lower faces occupy a common plane, certain of the brace bars extending diagonally from the corners of the deck toward the mid point thereof.

3. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods welded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck, that comprises bars welded in crosswise position to the undersides of the lower series of rods, adjacent to the longitudinal edges of the deck sheet, bars disposed between rods of said lower series, adjacent to the ends of the deck sheet and welded to the undersides of the upper series of rods, and also welded to the other bars at points adjacent to the corners of the deck, brace bars welded to the undersides of the upper series of rods and at their ends to the sides of those bars that are welded to the lower series of rods, other brace bars disposed angularly of the first-named brace bars and welded thereto at their ends and to the undersides of the lower series of rods, legs welded to some of the bars at the corners of the deck frame, all of the said bars being of such vertical dimension that their lower faces occupy a common plane, those bars adjacent to the longitudinal edges and those

adjacent to the ends of the deck sheet being of channel form, and the brace bars being in the form of flat strips welded edgewise to the deck sheet.

4. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods weded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck, that comprises laterally-spaced flat bars whose upper edges are welded in crosswise relation to the undersides of the upper series of deck rods, laterally-spaced flat bars having their upper edges welded in crosswise relation to the undersides of the lower series of rods and welded at their ends to the vertical faces of the first-named flat bars, all of the bars being of such vertical dimension that their lower faces occupy a common plane.

5. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods welded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck, that comprises laterally-spaced bars whose upper edges are welded in crosswise relation to the undersides of the upper series of deck rods, laterally-spaced bars having their upper edges welded in crosswise relation to the undersides of the lower series of rods and welded at their ends to the vertical faces of the first-named bars, and other bars welded to the underside of the deck, along lines adjacent to two of its edges and to the ends of the first-named bars, all of the bars being of such vertical dimension that their lower faces occupy a common plane.

6. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods welded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck comprising flat bars some of which are disposed in crosswise relation to the upper series of rods and welded thereto at their upper edges, and others in crosswise relation to the other series of rods and having their upper edges welded thereto, the ends of certain of the bars bridging the spaces between the other bars, and welded thereto at their ends, the bars being of such vertical dimension that their lower faces occupy a common plane.

7. A container base comprising a lattice-like deck sheet of an upper series of laterally-spaced rods welded crosswise of a lower series of laterally-spaced rods, a supporting frame for the deck comprising flat bars some of which are disposed in crosswise relation to the upper series of rods and welded thereto at their upper edges, and others in crosswise relation to the other series of rods and having their upper edges welded thereto, the ends of certain of the bars bridging the spaces between the other bars, and welded thereto at their ends, the bars being of such vertical dimension that their lower faces occupy a common plane, a rectangularly-arranged framework of channel-shaped bars encompassing the flat bars and welded to the outer ends thereof and to the undersurface of the deck, and legs beneath the channel-shaped bars, at the corners of the base.

References Cited in the file of this patent

UNITED STATES PATENTS

797,871	Smith	Aug. 22, 1905
2,487,687	Arthur et al.	Nov. 8, 1949
2,622,830	Coit, Jr.	Dec. 23, 1952
2,648,455	Bitney	Aug. 11, 1953
2,667,319	Coit, Jr.	Jan. 26, 1954