

2,086,923

Filed March 1, 1933

Fig. 1 is a perspective view of a mechanical device, likely a conveyor or transport system. It shows a frame with rollers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) and a curved end section (11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). The device is shown in a perspective view, with a side view (Fig. 2) and a detail view (Fig. 3) also included.

Fig. 2 is a side view of the device, showing the frame and rollers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). The device is shown in a side view, with a perspective view (Fig. 1) and a detail view (Fig. 3) also included.

Fig. 3 is a detail view of the device, showing the frame and rollers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). The device is shown in a detail view, with a perspective view (Fig. 1) and a side view (Fig. 2) also included.

25/ Fig. 3

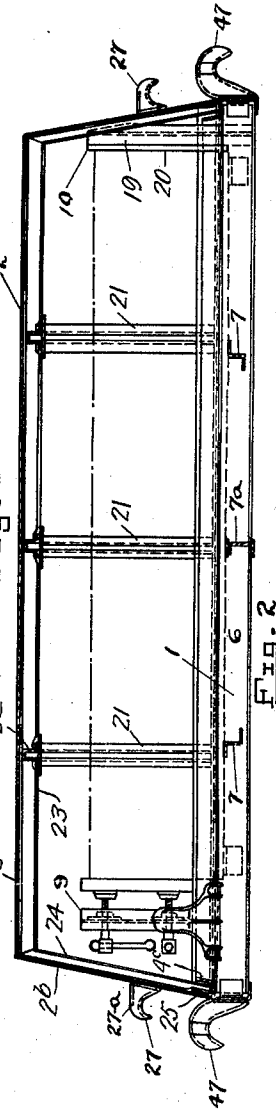


Fig. 2

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2,086,923

CONTAINER

Filed March 1, 1933

7 Sheets-Sheet 2

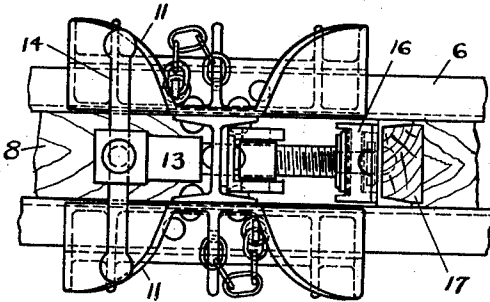


Fig. 6

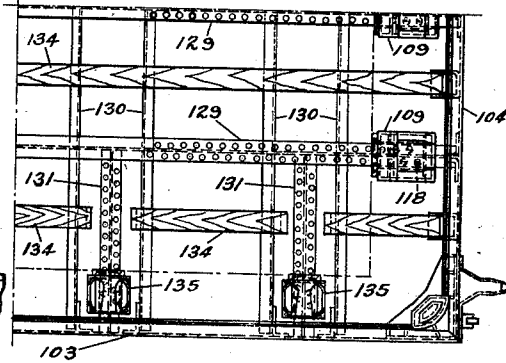


Fig. 28

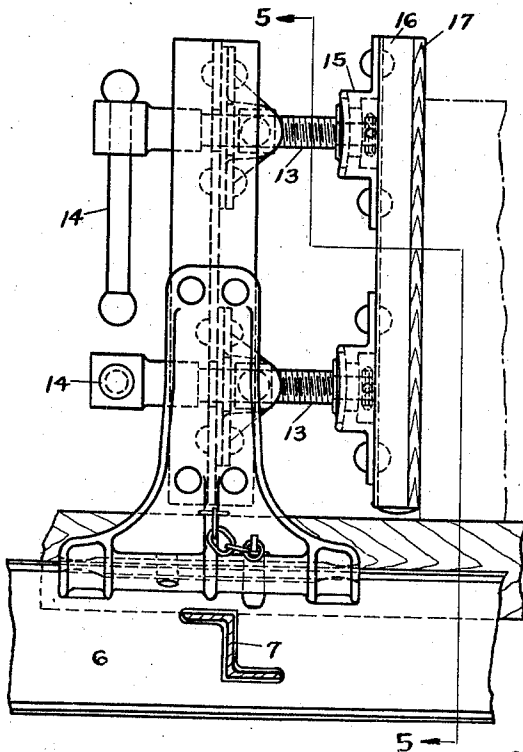


Fig. 4

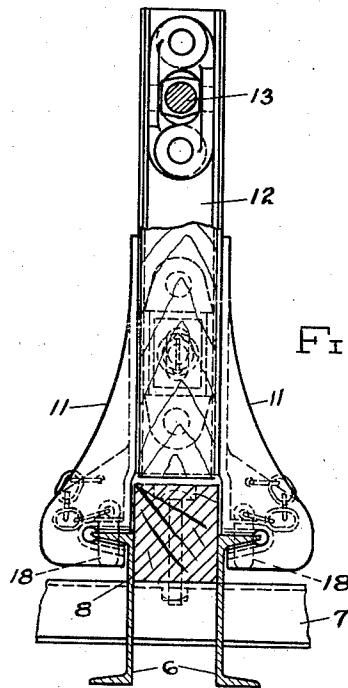


Fig. 5

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7 Sheets-Sheet 3

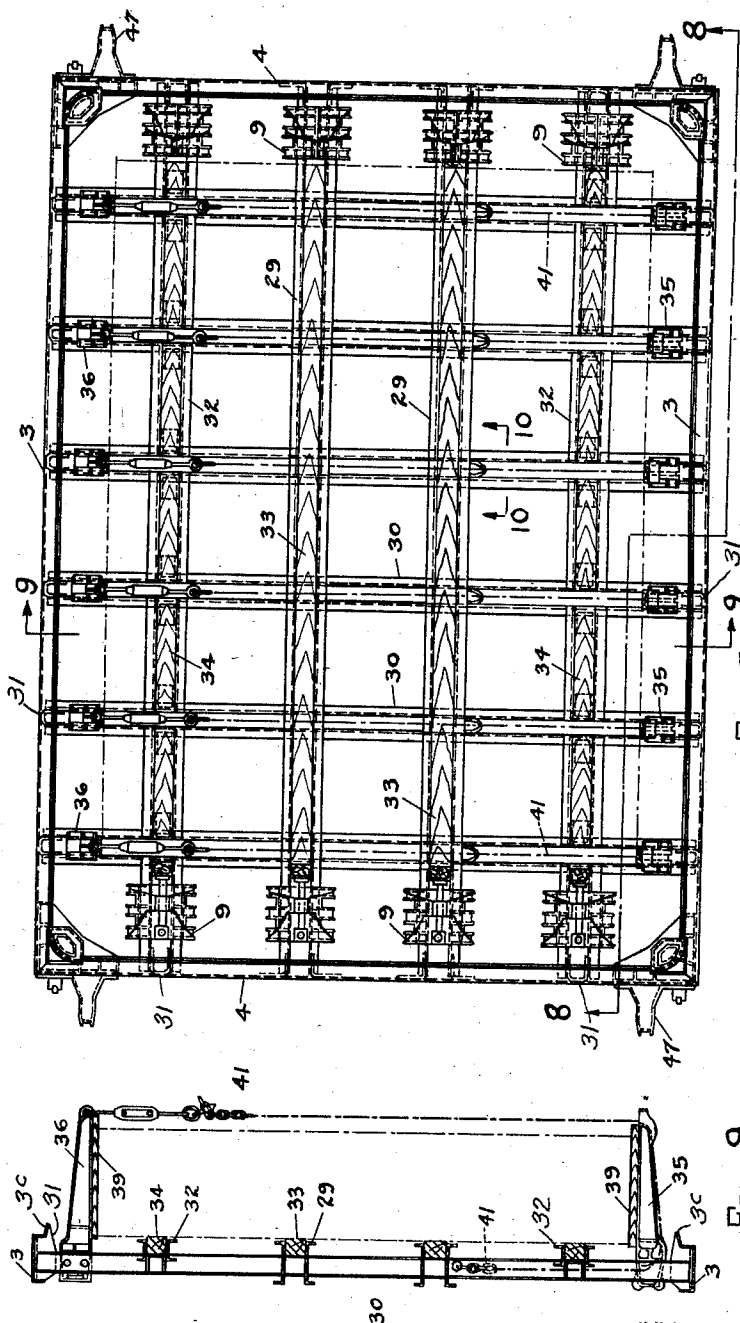


Fig. 7

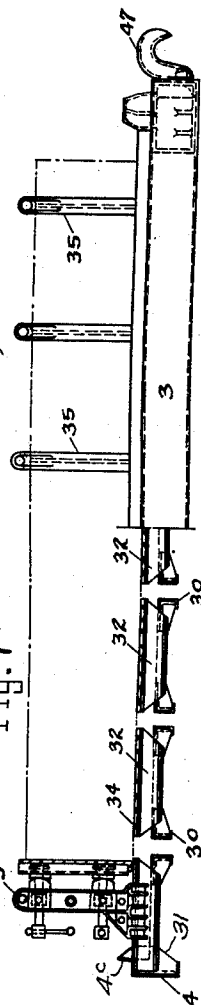


Fig. 8

Fig. 9



Fig. 10

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2,086,923

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7 Sheets-Sheet 4

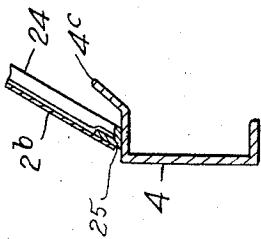


Fig. 29

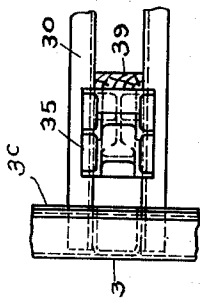


Fig. 13

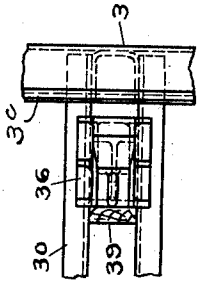


Fig. 16

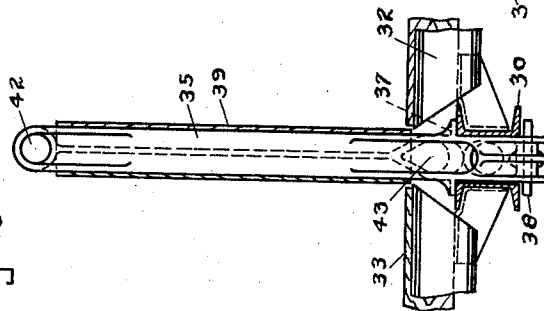


Fig. 12

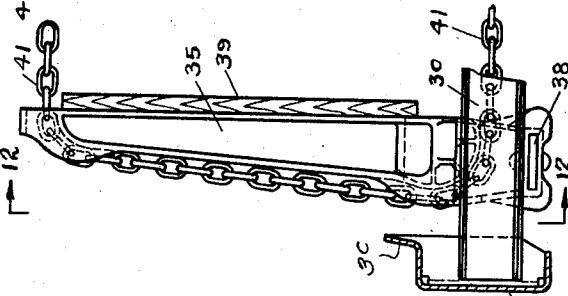


Fig. 11

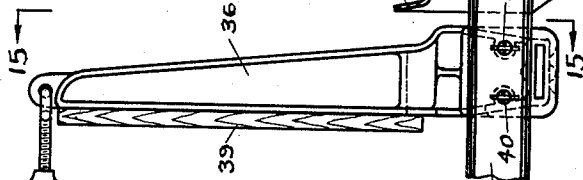


Fig. 14

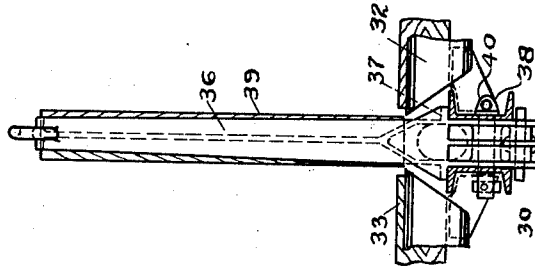


Fig. 15

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2,086,923

CONTAINER

Filed March 1, 1933

7 Sheets-Sheet 5

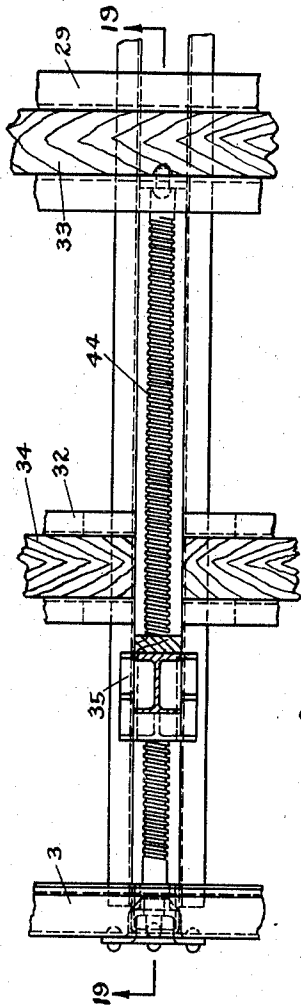


Fig. 17

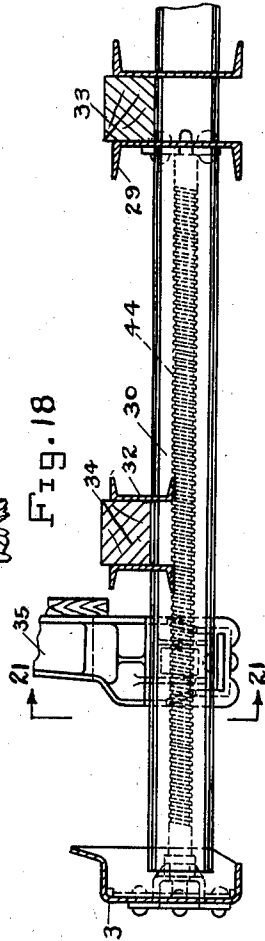


Fig. 18

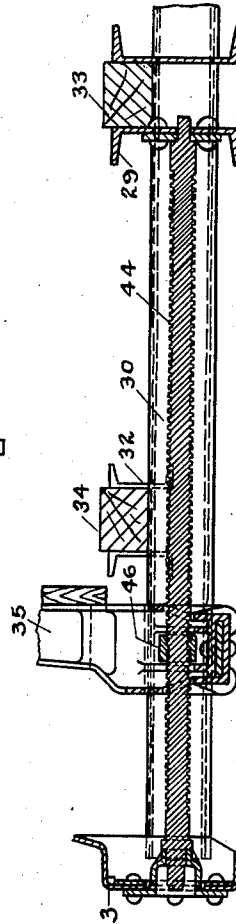


Fig. 19

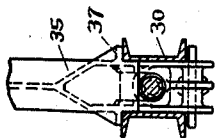


Fig. 20

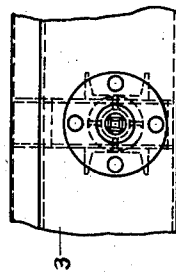


Fig. 21

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2,086,923

CONTAINER

Filed March 1, 1933

7 Sheets-Sheet 6

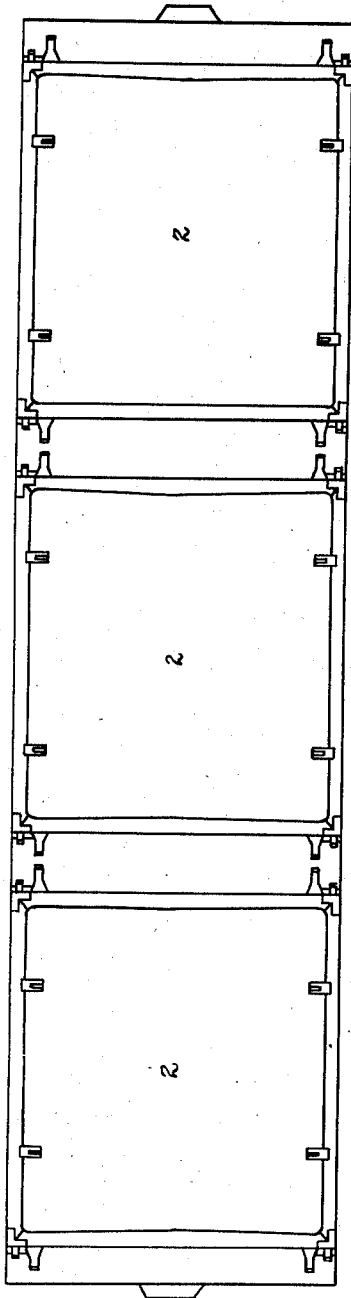


Fig. 23

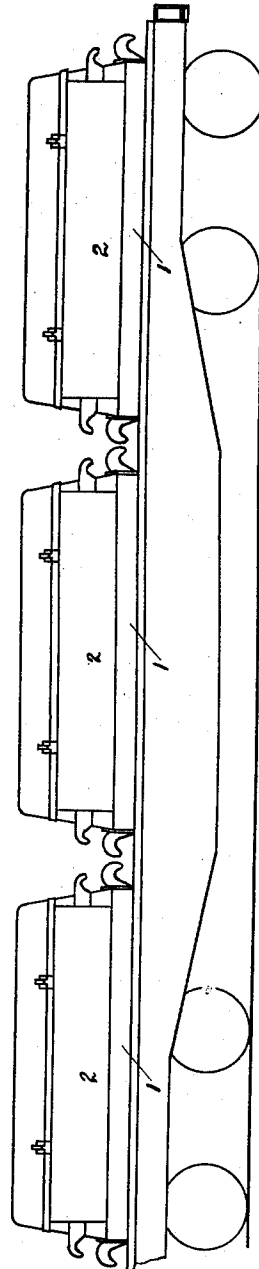


Fig. 22

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2,086,923

CONTAINER

Filed March 1, 1933

7 Sheets-Sheet 7

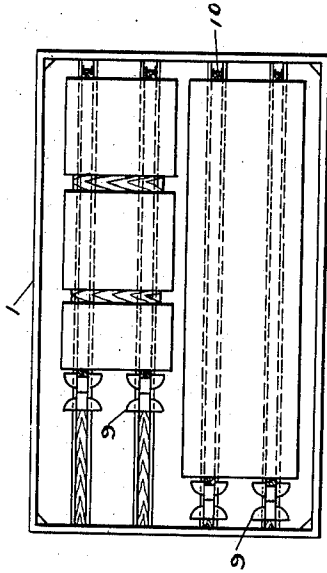


Fig. 25

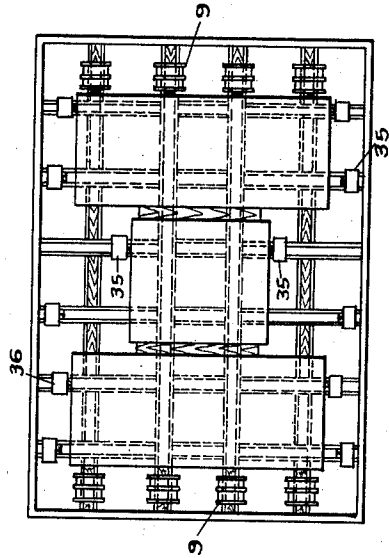


Fig. 27

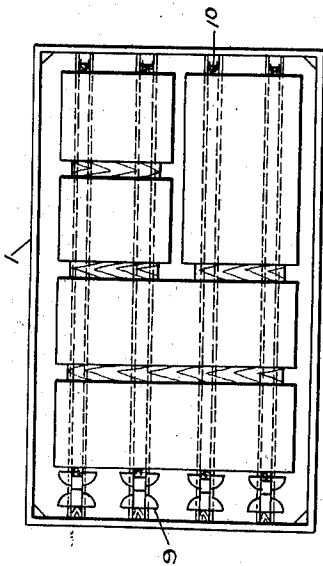


Fig. 24

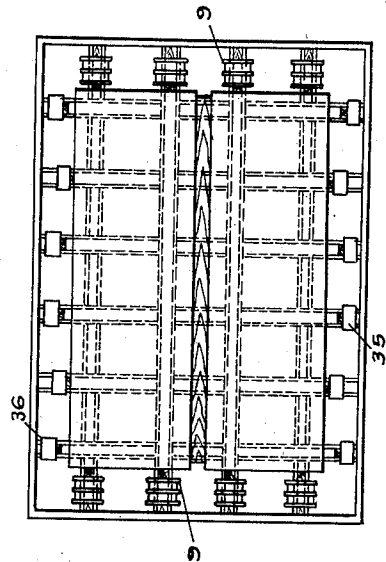


Fig. 26

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UNITED STATES PATENT OFFICE

2,086,923

CONTAINER

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Application March 1, 1933, Serial No. 659,108

26 Claims. (Cl. 220—1.5)

The invention hereinafter described pertains to containers and particularly a type of container adapted for shipment of flat sheets of relatively thin metal such as is used in automobile body building and similar construction in which the surface of the sheets must be kept flat, free from rust and scratches, although it may be used for other purposes whenever the nature of the lading will permit.

Various methods have heretofore been used in transporting such lading, all of which necessitated excessive handling as well as considerable packing, since the most popular method was to bind the sheets in bundles, which were braced top and bottom as well as along the sides and then secure the individual bundles in place upon the floor of a box car. By these methods the sizes of the bundles of sheets which could be handled were limited by the ability to handle the bundles and the size of the door openings, and several handlings were necessary to prepare the individual bundles for shipment and afterwards in delivery to the customer.

The herein described invention makes possible the loading of relatively large unbound packs of sheets directly upon the container and the securing of the packs in place by means of devices forming a permanent part of the container. The container may then be loaded upon a car and transported to the customer.

An object of the invention is to provide a container for receiving and securing unbound stacks of flat sheets of metal.

Another object of the invention is to provide a container for transporting unbound stacks of flat sheets of metal which protects the lading against weather and damage in transit while being transported in open top railway cars.

Another object of the invention is to provide a container upon which the sheets may be loaded directly from the mill and secured therein without further packing.

A further object of the invention lies in the form of the container and the sheet securing means as hereinafter described.

In the drawings forming a part of this specification Fig. 1 is a plan view of the container, one-half showing the cover in place and the other half showing the cover removed; Fig. 2 shows a section of the container taken along the lines 2—2 of Fig. 1; Fig. 3 shows a partial end view of the container and part in section, the section being taken along the lines 3—3 of Fig. 1; Fig. 4 shows a section taken along the lines 4—4 of Fig. 1; Fig. 5 shows a section taken along the

lines 5—5 of Fig. 4; Fig. 6 shows a plan view of Fig. 4; Fig. 7 shows a plan view of a modification of the container with the cover removed; Fig. 8 shows a section taken along the lines 8—8 of Fig. 7; Fig. 9 shows a cross section of Fig. 7 taken on the lines 9—9 of that figure; Fig. 10 shows a partial section of the container taken along the lines 10—10 of Fig. 7; Figs. 11 to 15 inclusive show the transversely movable lading securing means mounted on the container; Fig. 13 shows a plan view of Fig. 11 and Fig. 16 shows a plan view of the post shown in Fig. 14; Fig. 17 shows a modification of the means for effecting transverse movement of the lading securing means; Fig. 18 is a plan view of the mechanism shown in Fig. 17; Fig. 19 is a section taken along the lines 19—19 of Fig. 18; Fig. 20 is an end view of the mechanism shown in Fig. 19; Fig. 21 is a section taken along the lines 21—21 of Fig. 17; Fig. 22 is an elevation of a railway car having the containers mounted thereon; Fig. 23 is a plan view of the car and containers shown in Fig. 22; Figs. 24 to 27 inclusive show various methods of arranging the unbound stacks of lading upon the container base; Fig. 28 is a one-quarter section of the base of the container of Fig. 1 showing a modification of the invention illustrating another method of assembling the supports for the lading and the abutments for securing the lading in position on the base; Fig. 29 is a section on lines 29—29 of Fig. 3 showing water seal formed between base end member 4 and the cover.

Referring now in detail to the drawings the container comprises a base 1 and cover 2. The base and cover being so related to each other as to form a complete unit and the suggested limits for loading lading therein are indicated by dot and dash lines in Figs. 6 and 7. The base 1 comprises side members 3 and end members 4 suitably connected at their ends by corner braces 5. The members 3 and 4 are preferably formed of pressed plates having top and bottom flanges and a vertical connecting web. The bottom flanges being intumed to form a support for the base and the intumed top flanges forming a support for the cover 2. The inner free edges of the top flanges are deflected upwardly at c serving to prevent transverse movement of the cover 2 and to form a seal adapted to shed moisture and prevent its entrance into the container.

Connecting the end members 4 on opposite sides of the longitudinal center line of the base are the members 6 comprised of spaced channels having their flanges oppositely disposed and connecting the side members 3 at spaced intervals

along their length are the Z-shaped members 7. In the base as shown by Fig. 1 the members 6 are cut out to permit passage of the members 7. These members 6 and 7 serve to brace the base and to support the lading. An additional transverse brace 7^a may be used and disposed below the upper plane of the members 6.

As shown in Fig. 1 of the drawings the channels of the members 6 are arranged in pairs longitudinally of the container and a wood member 8 is mounted between the flanges of the channels in such a manner as to have the upper face thereof in a plane above the top flanges of the members 6. There are a plurality of these members 6 arranged on each side of the longitudinal center line of the container and in the present embodiment of the invention they serve as the sole support of the lading upon the container base.

For the purpose of securing the stacked plates against movement upon the base there are provided abutment members 9 and 10 on opposite ends of each of the members 6. In the present embodiment of the invention the members 9 are shown to be movable along the members 6 and the members 10 are shown as mounted adjacent one end of the members 6 in fixed relation thereto. It is to be understood, however, that the members 10 may, if desired, be movably mounted on the members 6 in a manner similar to the mounting of the members 9.

The member 9 comprises a base having wing portions 11 adapted to overlie and embrace the oppositely disposed top flanges of the channels forming the members 6. The intermediate portion of the base being offset so as to provide clearance for the wood members 8. Projecting upwardly, preferably in vertical relation to the base, is the portion 12 to form an abutment for the lading. Mounted on the member 9, in vertically spaced relation, on bearings trunnion mounted in the portion 12, are two screw threaded members 13. At one end of the members 13 are secured operating handles 14 and the other end of the member is threaded into bases 15 mounted on a member 16 which spans the distance between the members 13. The member 16 is preferably of channel form having the flanges thereof vertically disposed and directed away from the abutment member 9. The member 16 is of such length as to provide a clearance beneath its lower end and the wood bearing members 8 and has secured between its flanges a wood bearing member 17. Thus, it will be seen that it is the member 16 and its contained member 17 which comes into actual contact with the lading and which in turn are held in fixed relation to the lading by means of the portion 12 of the member 9.

To provide for movement of the members 9 longitudinally of the members 6 it will be observed that the wing portions 11 loosely engage the flanges of the members 6 so that the member 9 can be moved along the members 6. The wings 11 have suitably disposed perforations adapted to register with suitably spaced perforations in the flanges of the members 6 so that the members 9 can be anchored in place anywhere along the members 6 by inserting the pins 18 into the registering perforations.

The members 10, when adapted to be mounted in fixed relation to the members 6, comprise a vertically disposed portion 19, preferably formed of an I-beam or channel having the flanges secured between the oppositely disposed webs of the channels forming the members 6. A wood

member 20 is preferably mounted between the flanges of the portion 19 and disposed inwardly of the container base. It is against this wood member 20 that the lading abuts and is thereby prevented from injury through contact with the metal portion of the member 10. It is to be understood, however, that if it is desired to make the member 10 movable along the members 6, this can be easily accomplished by shortening the portion 19 and mounting it between pairs of wings such as the wings 11 forming the base of the member 9.

For the purpose of protecting the lading against damage and to keep out moisture the cover 2 is provided. This cover is preferably rigid and comprises a framework of inclined side ribs 21 and arcuate connecting ribs 22. There is also a longitudinal center rib 23 and inclined end ribs 24 extending downwardly therefrom. Extending along each side and end adjoining the aforementioned ribs are connected angular members 25 completing the cover. These members 25 serve the double purpose of securing the free ends of the framework ribs of the cover and to provide a bearing for the cover upon the base 1. These latter members 25 preferably have an intumed flange 26 adapted to cooperate with the flange upon the base members 3 and 4. This framework is covered by sheathing 2^a, 2^b, and 2^c.

The particular contour of the members forming the ribs of the cover is of no consequence except as to the necessities of good construction and as shown in the drawings the ribs at the sides and ends of the center rib 23 are made channel shaped with outwardly turned flanges on the free ends of the legs of the channel. It will, of course, be obvious that any other desirable contour may be used which will serve the purposes of strength and rigidity.

As will be observed by reference to Fig. 3 the top ribs 22 connecting the side ribs 21 are arcuate in form and the side and end ribs converge upwardly. By constructing the cover with an arched top portion greater strength is obtained than with a horizontal construction and by inclining the side and end ribs the covers of a series of such containers can be stacked one upon the other without difficulty. For the purpose of handling the cover there is provided at the corners handling hooks 27. These hooks preferably have a flat top portion 27^a to serve as a bearing for another cover when stacked upon the first-mentioned cover and are so disposed as to prevent binding between the covers when so stacked. We also prefer to provide at the upper edges of the cover intermediate the ends auxiliary hooks 28. These are so disposed as to not interfere with the stacking of the covers and are for the purpose which will be described hereinafter.

Referring now to Fig. 7 of the drawings in which is shown a plan view of a modification in the base of the container, it will be noted that the side and end members of the base are the same as shown in Fig. 1 of the drawings and are similarly connected. The central longitudinal members 29 comprise pairs of spaced channels similar to the members 6 of Fig. 1 and the transverse members 30 are comprised of channels of less depth than those forming the members 29 and the members 29 have suitably shaped openings therein to permit the members 30 to extend from side to side of the base as an integral member. Both the members 29 and 30 are suitably secured to the sides or ends of the container base as by U-

shaped members 31. Between the members 29 and the sides of the container in a direction longitudinally of the base are short members 32 which comprise spaced channels connecting the members 30 as shown in Fig. 8. Disposed between the channels forming the members 29 and 32 are wood members 33 and 34 respectively which project above the upper flanges of these members 29 and 32 to form a support for the lading. It will be observed that the lading when supported upon the wood members 33 and 34 do not engage any of the metal portions of the container. It will also be observed that whilst the wood members 33 are continuous the members 34 are short sections spaced between the members 30 and likewise that the members 32 are in the same plane as the members 29 for a purpose which will be later explained. Mounted on opposite ends of the members 29 and the members comprised of the sections 32 are the members 9 and the top flanges of these longitudinal members have suitably spaced perforations therein for registering with the perforations in the wings 11 of the members 9 for the purpose previously set forth. By reason of the spacing of the members 30 below the plane of the upper flanges of the members 29 and 32 there is provided sufficient clearance for the wings 11 of the members 9 so that the members 9 can move the entire length of the container. For the purpose of securing the lading in a direction transversely of the container there are mounted on opposite ends of the members 30 abutment members 35 and 36. These members are shown in the drawings as castings and comprise a base portion secured between the flanges of the channels forming the members 30 and a vertically disposed portion against which the lading abuts. Oppositely disposed flanges 37 on the base portion bear on the upper flanges of the members 30 and the base depends below the lower flanges of the members 30 and is engaged by a transversely disposed member 38. It will be observed that when the member 38 is in position the members 35 and 36 are restricted in movement in a vertical direction and are movable transversely of the container until engaging with the longitudinal members 29. The short members 32 being cut away sufficiently to permit the passage of the members 35 and 36 as shown in enlarged detail in Figs. 12 and 15. For the purpose of preventing injury to the lading by engaging with the metal members 35 and 36 wood members 39 are mounted on the faces engaging the lading. For the purpose of securing the member 36 in any fixed position intermediate the member 29 and the side of the container the base portion of the member has suitably formed perforations adapted to register with suitably spaced perforations in the members 30 and when pins 40 are inserted in the registering perforations the member 35 is fixed in position. For the purpose of securing the upper ends of the members 35 and 36 against displacement it is preferred to connect them by means of a chain 41 having a turn-buckle 42 at one end of the chain and preferably anchored in the member 35 for the purpose of placing the chain under tension to better secure the lading. While the member 35 may be retained in fixed position along the member 30 in a manner similar to that done with relation to the member 35 it is preferred to utilize the chain 41 connecting the upper ends of the members for this purpose. The chain is therefore made of sufficient length to be threaded through a suitable opening 42 in the upper end of the member 35 and extending down

the back of the member, thence through a suitably formed opening 43 in the base of the member 35 and then inwardly along the member 30 where it is secured adjacent the member 29. In this manner by suitable manipulation of the chain the member 35 can be held against lading anywhere between the member 29 and the adjacent side of the container. Thus, it will be seen that whilst the members 35 and 36 are limited in their movement transversely of the container, yet by reason of their being capable of moving over the greater portion of the width of the container, most all sizes of lading can be adequately secured.

In Figs. 17 to 21 inclusive there is shown a modification in the means for controlling transverse movement of the members 35 and 36. In this construction it is proposed to mount an endless screw threaded member 44 between the channels forming the members 30 and journaled at its ends in the members 29 and the adjacent side framing member 3 of the container base. By suitably securing a nut 45 within the base of the members 35 and 36 and upon the member 44 it will be obvious that if the member 45 is prevented from independent movement transversely of the members 35 and 36, upon rotation of the member 44 the members 35 and 36 will be moved transversely of the container throughout the length of the threaded portion of the member 44.

For the purpose of loading and unloading the container upon a suitable vehicle for transportation it is proposed to mount suitably formed hooks 47 on the ends of the container adjacent the corners thereof. These hooks may be of any suitable contour and of sufficient strength to support the loaded container when suspended from a crane or any other handling medium. If desired these hooks may be integrally formed with the stop castings mounted at the four corners of the container for the purpose of securing the container in position upon the railway car.

By referring now to Figs. 24 to 27 inclusive where there is shown diagrammatically several suggested methods of loading the unbound stacks of metal upon the container base, it will be observed from Fig. 24 in which a container base, such as is shown in Fig. 1, is loaded, the stacks of plates are so disposed that they all abut against the members 10 and the members 9 are moved into close proximity with the stacks of plates, after which the members 9 are secured in position on the members 6 and by suitable manipulation of the handles 14 of the screw threaded members 13, the member 16 is moved against the stacks so as to secure them in position on the container between the members 9 and 10. Sufficient tension can be induced by means of the screw threaded members 13 so as to hold the stacks against movement transversely of the base of the container. When the stacks of plates are so secured it will be observed that the underside of the stacks are suitably protected by the wood bearing members 8 in the member 6 and the wood bearing members 17 and 20 on the members 9 and 10 so as to prevent injury to the edges of the sheets and the bottom plate in each stack. After which the covers 2 may be inserted on the base as shown in Figs. 1, 21, and 22 and locked in position by means of the locks 48 such as are shown in Fig. 3 of the drawings.

In Fig. 25 of the drawings is shown diagrammatically another method of securing stacks of various sized plates upon the base shown in Fig. 1. In Figs. 26 and 27 are shown suggested methods of securing unbound stacks of plates upon

the container base as shown in Fig. 7 of the drawings. As previously stated one of the objects of the invention is to eliminate excessive handling of the lading between the mill and the customer and to this end the container is so designed that the containers can be moved to the finishing mill and the stacks of plates loaded by means of a crane directly on to the container base. The spacing between the longitudinal and transverse intermediate members of the base permit passage of the crane hooks and after securing the stacks in position upon the base, the cover can be lifted by means of the upper hooks and placed in position on the base. For this purpose the upper hooks 28 on the cover are suitably shaped to receive the particular shaped hook usually employed in handling the stacks of plates within the mill, after which the entire container may be raised by means of the hooks 47 and placed in position on the railway car as shown in Fig. 22 of the drawings. After the car is completely loaded it is set out on the track and transported to the customer.

Upon arriving at the customer's plant the containers may be lifted bodily from the car and distributed throughout the plant or if desired the cover of one container can be lifted off and placed upon the cover of an adjacent container, the covers nesting together by reason of the converging sides and ends previously described and the upper cover being supported upon the lower hooks of the cover after which the lading can be removed from the container while the container remains in place upon the car. The adjacent container may then be unloaded after removing the two nesting covers which can be placed upon the adjacent unloaded container and the three covers nested together or the two nested covers can be moved over on to the previously unloaded container and the contents of the second container removed.

In this manner the contents of all the containers can be removed while the containers remain in place on the car and the covers can be nested as previously described without the necessity of removing any of the covers entirely from the car which method eliminates the possibility of any covers becoming lost or damaged while lying around upon the ground. Likewise, the nested arrangement permits compact storage of the covers within the loading stage when not in use.

Throughout the description the members supporting the lading and upon which the abutment members 9, 10, 35, and 36 are mounted have been described as channel members but it is to be understood that any other structural or pressed shape combining an upper flange and a vertical web may be used, such as an I-beam, a T-beam, a Z-bar or an angle. Likewise, any other of the members going to make up the container and cover may have equivalent shapes substituted therefor to suit any particular details of construction which may be desired. The particular contour of the cover, shape and size of the abutment members, or the arrangement of the individual abutment members can be varied from the arrangements as shown in the drawings without departing from the scope of the invention as contained in the appended claims.

Illustrating how the above referred to modification can be embodied in the container, Fig. 28 shows one quarter of the container base as shown in Fig. 7 and embodying the modifications. The side members 103, and end members 104 are

identical with members 3 and 4. The members 104 are joined by longitudinally extending members 129 spaced, one at the longitudinal center line of the base and one on each side thereof. Joining the side members 103 and spaced longitudinally of the base are channel members 130. The members 129 and 130 are continuous and the members 129 have suitable openings to receive the members 130. The members 130 are spaced sufficiently far apart to permit the insertion of T-shaped members 131, which latter members extend only to the members 129. Disposed longitudinally of the container upon the members 130, are wood bearing members 134, which members are omitted above the members 131. Mounted upon opposite ends of the I-beams forming the members 129 are the abutment members 109. The top flange of the members 129 have suitably disposed perforations which register with the perforations in the base of the members 109 as shown by Figs. 4 and 5 and pins 118 engage with the registered perforations. The members 135, similar to abutment members 35, are mounted on the members 131, which latter members have suitably disposed perforations in the top flange which register with openings in the base flange of the members 135. The base flanges of member 135 are similar to those of 109 and are secured in position in a manner similar to that used in securing the members 109.

With such a container the cover and the method of loading and securing the lading on the base upon the members 134 is the same as previously described.

Having thus described the invention what we claim as new and desire to secure by Letters Patent is:

1. In a container of the class described, in combination, a base and a cover, lading supporting members on said base and adjustable means on said base and lading supporting members for securing unbound stacks of steel sheets, said means comprising spaced abutments and a plurality of independently operable adjustable members for engaging the lading on said lading supporting members.

2. In a container of the class described, a rigid base comprising marginal members flanged to form supporting feet and joined at their meeting edges, bracing joining the opposite marginal members, abutment members movably mounted on some of the said bracing, means selectively securing the abutment members in fixed relation to the said bracing and lading supports on some of said bracing intermediate the said marginal members.

3. In a container of the class described, a rigid base comprising marginal members flanged to form supporting feet and joined at their meeting edges, bracing joining the opposite marginal members, abutment members movably mounted on some of the said bracing, means selectively securing the abutment members in fixed relation to the said bracing and lading supports on some of said bracing intermediate the said marginal members, a rigid cover for said base and means on said base and cover for engagement by a suitable handling mechanism.

4. A container having in combination with a detachable cover, a rigid base forming a support for lading, vertically disposed members slidably mounted on the base and movable inwardly from opposite marginal edges of the base, means for securing the slidable vertical members in fixed relation upon the base, bearing members mounted

on the vertical disposed members for engaging the lading, adjustable means between the vertical members and the bearing members, a bearing for the cover upon the base and lifting members at opposite marginal edges of the base for handling the container.

5. In a container adapted for shipping and distribution of lading, a base member provided with lifting brackets at opposite marginal edges, a cover comprising an open bottom, a closed top, side and end walls forming obtuse angles with the top, a bearing for the cover on the base and handling brackets for the cover disposed between the upper and lower marginal edge of the cover at opposite sides thereof.

6. In a container of the character described the combination with a rigid detachable cover comprising a closed top, depending side and end walls and a marginal frame joining the free ends of the walls, of a rigid base member comprising a marginal frame providing a bearing for the cover and having handling members secured at opposite sides of the latter marginal frame, lading supporting members connecting opposite sides of the marginal frame, vertically disposed abutments on some of the lading supporting members and disposed inwardly of the marginal frame, means on some of the abutments providing for movement of the abutment relative to the lading supporting members and for exerting pressure upon the sides of lading disposed between the abutments to retain the lading in fixed relation to the supporting members.

7. In a container of the class described the combination with a rigid base including marginal frame members, and lading supporting members connecting two opposite marginal members, of a readily detachable rigid member comprising a closed top wall having depending side and end walls connected therewith and to each other, a bearing on the marginal frame members of the base for the free ends of said side and end walls, a flange on the base marginal frame spaced inwardly of the bearing for the detachable member and extending above the lading supporting members.

8. In a container of the class described, the combination with a rigid base including marginal frame members, of lading supporting members connecting two opposite marginal frame members and extending above the top horizontal plane of the latter, vertically disposed lading securing abutments mounted on the said supporting members, means connecting some of the abutment members to the lading supporting members for movement relative to the supporting members, and means mounted on some of the abutment members for limited movement relative to the abutment members for engaging lading disposed between the abutments.

9. In a container of the class described, the combination with a rigid base including marginal frame members, lading supporting members connecting two opposite marginal frame members and extending above the top horizontal plane of the latter, vertically disposed lading securing abutments mounted on the said supporting members, means connecting some of the abutment members to the lading supporting members for movement relative to the supporting members, means mounted on some of the abutment members for limited movement relative to the abutment members for engagement with lading disposed between the abutments and brackets secured to the marginal frame members for

handling the base during loading, unloading and transporting the container, of a rigid cover member completing the container and comprising a top wall, depending side and end walls connected to the top wall and to each other, said cover member being supported upon the base and enclosing the lading.

10. In a container of the class described, the combination with a base comprising marginal framing members, lading supporting means connecting opposite framing members and disposed above the top horizontal plane thereof and a marginal flange enclosing the lading support and projecting above the framing members inwardly of the marginal edges of the base, of a closure member comprising a top wall, depending side and end walls connected to said top wall and to each other, with the free edges of the side and end walls bearing on the base and enclosing the said marginal flange.

11. In a shipping container of the class described the combination of a base comprising angular marginal framing members provided with top and bottom flanges, the top flange having a portion extending upward at an angle to the main portion thereof, lading supporting members connecting two opposite framing members and projecting above the horizontal plane thereof, lading abutments mounted on said base and movable longitudinally relative to the lading supporting members, lading embracing and retaining means pivotally mounted upon said abutments, fixed abutments on said lading supporting members opposite said movable abutments, transverse members spaced longitudinally of the lading supporting members, connected thereto and to the adjacent marginal frame members, and lading abutments movably mounted on said transverse members.

12. In a container of the class described, the combination with a rigid cover of a base including marginal framing members providing a support for the cover, spaced members secured to oppositely disposed marginal members of the base, and abutment means mounted on each of said members for independent movement thereon, thereby to secure lading in fixed position upon the base.

13. In containers of the class described, the combination with a rigid cover of a base comprising marginal members providing a support for the cover, lading supporting members secured to opposite marginal members of the base, a plurality of members disposed transversely to said lading supporting members and connected to oppositely disposed marginal frame members, and abutment members movably mounted upon said transversely disposed members.

14. In a container of the class described, a base comprising a rigid marginal frame, a plurality of spaced members connecting a pair of oppositely disposed members of the frame, vertically disposed abutments secured to some of said spaced members and adapted for independent movement longitudinally of their respective members, means for locking said abutments in position on the members, and means on some of said abutments for adjustably engaging lading disposed on the base between the abutments.

15. In a container of the class described, the combination with a rigid base having connected marginal members and a plurality of lading supporting members secured to opposite marginal members of the base, of vertically disposed abutments mounted in pairs on some of said lading

supporting members, one of the abutments of each pair being adjustable relative to the other and relative to each of the other pairs of abutments.

5 16. In a container of the class described, the combination with a rigid base frame of a plurality of spaced members connecting opposite sides of the frame, lading supporting means on some of said members and extending above the horizontal
10 plane thereof, vertically disposed abutments mounted on some of said members and movable longitudinally of the members and the lading supported means.

17. In a container of the class described, the
15 combination with a detachable rigid cover of a base having marginal members, spaced lading supporting members connecting two of the side marginal members of said base, transversely disposed members connecting the other two side
20 marginal members of the base, and disposed below the first-named members, and vertically disposed abutments movably mounted on the said transversely disposed members.

18. In a container of the class described, the
25 combination with a rigid readily detachable cover of a base having marginal members, spaced members connecting opposite side marginal members of said base, lading supporting means on some of said members, vertically disposed abutments on
30 some of said members and adjacent two sides of the frame for adjustably securing the lading disposed on the lading supporting means and between the abutments, said abutments being independently adjustable upon their supporting mem-
35 bers and movable inwardly from at least one of the sides of the base.

19. In a container of the class described, the combination with a rigid readily detachable cover of a base having marginal members supporting
40 cover, spaced members connecting the opposite sides of the container base, lading supporting means on some of said members, vertically disposed abutments on some of said members adjacent each side of the frame for adjustably secur-
45 ing the lading disposed on the lading supporting means and between the abutments, said abutments being independently adjustable upon their supporting members and movable inwardly from at least two of the sides of the base, and means
50 on some of said abutments providing additional adjustment between the abutment and the lading and movable relative to the abutment.

20. In a container of the class described, the combination in a base thereof of rigidly con-
55 nected marginal members, spaced lading supporting members connecting two opposite sides of the base, vertically disposed abutments mounted on opposite ends of said lading supporting members, transversely disposed members connecting the remaining sides of the base, a pair
60 of abutment members adjustably mounted on

each of said transverse members for movement longitudinally of the members in a direction transversely of said lading supporting members.

21. In a container base of the class described, the combination with a rigid frame of a member
5 disposed between two opposite sides of the frame, an abutment having one end slidably engaging the said member, and means releasably securing the abutment in selected positions on the said member.
10

22. In a container base of the character de-
scribed, the combination with a rigid frame of a pair of members disposed between opposite sides of the frame, an abutment disposed above said pair of members, means on said abutment en-
15 gaging each of said members, and means engaging said members and abutment to releasably secure the abutment in selected positions throughout a portion of the length of the members.

23. In a container base of the character de-
20 scribed, the combination with a rigid marginal frame of a pair of angular members disposed between opposite sides of the marginal frame, lading supporting means disposed between the angular members, connected thereto and projecting
25 above the top plane thereof, an abutment mounted on the members and straddling the lading supporting means, and fastening means releasably securing the abutment in selected positions throughout a portion of the length of said mem-
30 bers.

24. In a container base of the character de-
scribed, the combination with a rigid marginal frame of a pair of spaced angular members dis-
35 posed between opposite sides of the frame, top flanges on said members, lading supporting means mounted on said members and extending above the said flanges, a lading abutment mounted on said flanges and adapted to straddle said lading supporting means and means releasably securing
40 the abutment in fixed positions along a portion of the length of said members.

25. In a container of the class described in combination, a rigid base having means thereon for handling, a rigid cover including a closed top, side
45 and end walls, a support for the cover on the base, means on the container base providing a support for lading, and vertically disposed members movably mounted on the base for engagement with the lading.
50

26. In a container of the class described in combination, a rigid base, a rigid cover, a bearing for the cover on the base, supports on the base adjacent the upper plane thereof for lading, vertically disposed movable members on the base for
55 engaging opposite sides of the lading, and means on said members for securing the lading in fixed position relative to said members.

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