July 17, 1956 W. J. MEYER ET AL 2,754,771

CAR END PLATE CONSTRUCTION

Filed Nov. 15, 1952 2 Sheets-Sheet 1

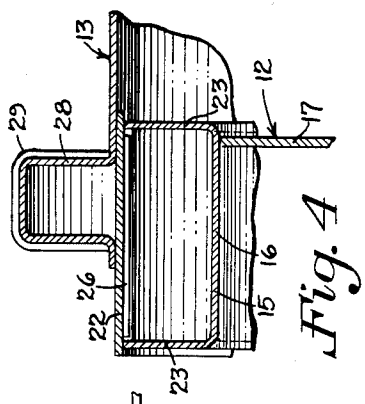

Fig. 4

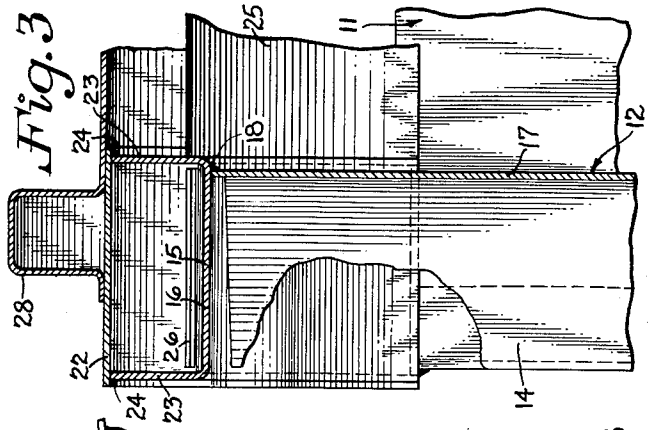

Fig. 3

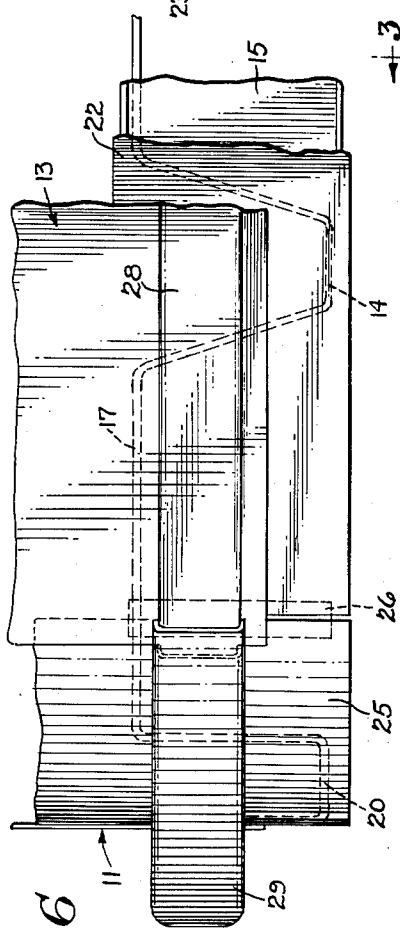

Fig. 6

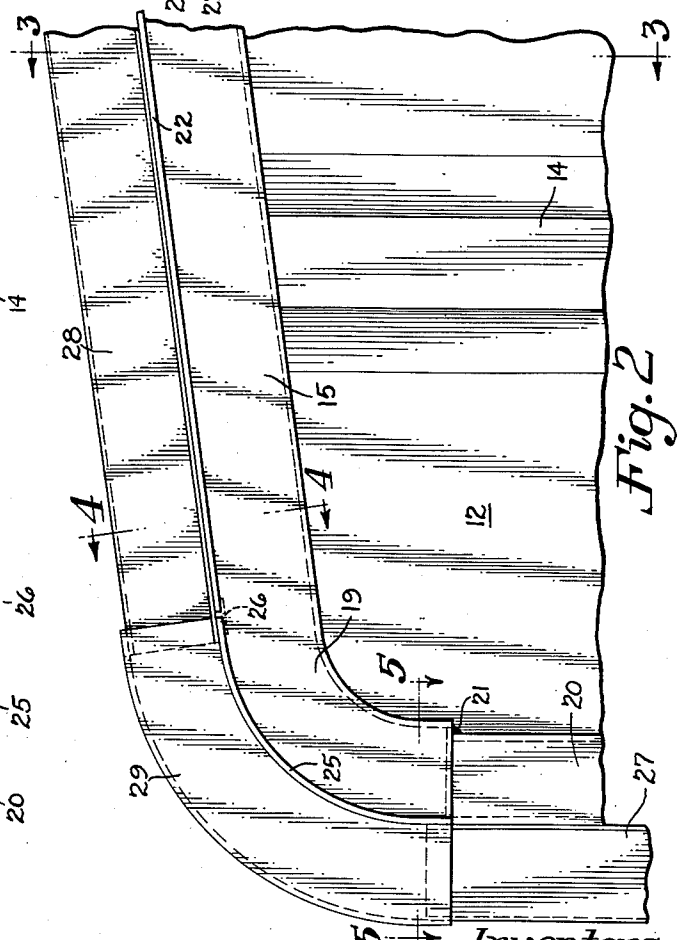

Fig. 2

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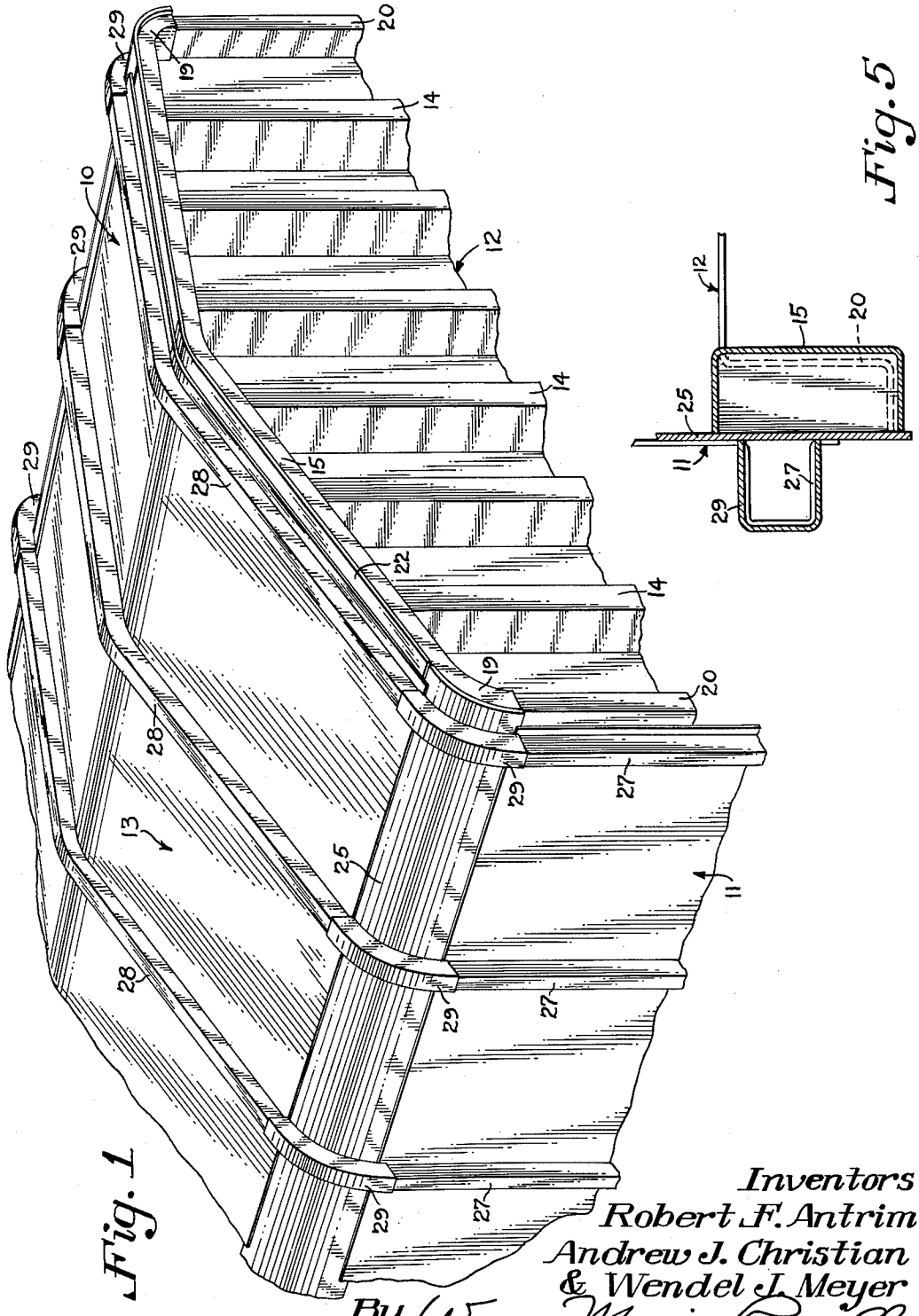

Fig. 1

Fig. 5

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CAR END PLATE CONSTRUCTION

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2 Claims. (Cl. 105—410)

This invention relates to railway house cars and is primarily concerned with a novel car end plate construction for a railway box car.

The principal object of the invention is to provide in a railway house car an end wall with an end plate positioned upon the top of the end wall and secured thereto and a roof positioned upon and secured to the end plate.

Another object of the invention is to provide in a railway house car an end wall having an open section end plate positioned upon the top of the end wall and secured thereto with a metal closure plate positioned upon and secured to the end plate and a roof positioned upon and secured to the metal closure plate.

A further object of the invention is to provide in a railway house car an end wall having vertically extending corrugations extending to the top thereof and a channel-shaped end plate arranged transversely of the car and having its web positioned upon the top of the end wall and secured thereto and a metal closure plate positioned upon the legs of the end plate and secured thereto and a roof positioned upon the closure plate and secured thereto.

A specific object of the invention is to provide in a railway house car an end wall and a channel-shaped end plate having its web positioned upon the end wall and secured thereto and having its ends turned downwardly and secured to corner posts comprised of vertical corrugations in the end wall and a metal closure plate positioned upon the legs of the end plate and secured thereto and the ends of the closure plate terminating at locations spaced from the ends of the end plate and side plates positioned upon the end plate at the ends of the closure plate and secured to the end plate and a roof positioned upon the closure plate and secured thereto.

A more specific object of the invention is to provide in a railway box car an end wall having vertical corrugations extending to the top thereof and a channel-shaped end plate having its web positioned upon the end wall and welded thereto and having its ends turned downwardly and welded to corner posts formed by corrugations in the end wall and a metal closure plate positioned upon the upstanding legs of the end plate and welded thereto and the ends of the closure plate terminating at locations spaced from the ends of the end plate and side plates positioned upon the end plate at the ends of the closure plate and welded to the end plate and side walls welded to the end wall having vertical corrugations and a roof having a transverse corrugation along one end and said one end being positioned upon the closure plate and welded thereto and segmental members positioned upon the side plates and extending between the corrugation in the roof and the corrugations in the side walls and welded thereto.

The foregoing and other objects of the invention are attained by the construction and arrangement illustrated in the accompanying drawings wherein

Fig. 1 is a fragmentary perspective view of the top portion of one of the end walls and the end portion of the roof and the top and end portion of one of the side walls of a railway box car;

Fig. 2 is a fragmentary end elevational view of the railway box car showing one of the upper corner portions where one of the side walls and one of the end walls and the roof are secured together;

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 2;

Fig. 5 is a cross sectional view taken on the line 5—5 of Fig. 2; and

Fig. 6 is a top plan view of that portion of the car shown in Fig. 2.

The invention proposes a car end plate construction for a railway box car. The end wall has vertically extending corrugations therein extending from the bottom thereof to the top. An end plate channel-shaped in cross section extends the full width of the car and the web of the end plate is positioned upon the top of the end wall and is secured thereto. The ends of the end plate are turned downwardly and are secured to the upper ends of the corner posts at the edges of the end wall. An elongated metal closure plate is positioned transversely of the car upon the legs of the end plate and secured thereto and the ends of the closure plate terminate at locations spaced from the turns in the ends of the end plate. Side plates extending longitudinally of the car are positioned upon the end plate at the ends of the closure plate and are secured to the end plate. The roof has a transversely extending corrugation along one end thereof and said one end is positioned upon the closure plate and secured thereto. This car end plate construction is of great strength and will withstand high stresses in the end wall area and is especially adaptable to corrugated box cars.

In the drawings, 10 generally designates a railway house car or railway box car having side walls 11, end walls 12, and a roof 13. The car end plate construction at opposite ends of the car are identical and therefore the construction at only one end of the car will be described. The end wall 12 has spaced vertically extending corrugations 14 therein extending from the bottom thereof to the top thereof. An end plate 15 is arranged transversely of the car and extends the full width of the car and is positioned upon the top of the end wall 12. The end plate 15 is of channel form or U-shaped in transverse cross section and the web 16 of the end plate is positioned upon the top of the end wall sheet 17 and upon the upper ends of the corrugations 14 of the end wall. The end plate 15 is secured or welded to the top of the sheet 17 of the end wall 12 by a weld 18 as best shown in Fig. 3. The ends of the end plate 15 are turned downwardly at 19 and secured or welded to the upper ends of the corrugations 20, which form corner posts at the edges of the end wall 12, by welds 21 as best shown in Fig. 2.

An elongated metal closure plate 22 is positioned transversely of the car upon the legs 23 of the end plate 15, and is secured or welded to the legs of the end plate by welds 24 as best shown in Fig. 3. The ends of the closure plate 22 terminate at locations spaced from the downturned portions 19 at the ends of the end plate 15. A pair of side plates 25 of curved section extend the full length of the car and adjacent ends of the side plates are positioned upon the end plate 15 at the ends of the closure plate 22 and welded to the end plate. A reinforcing element 26 is positioned against the underface of each side plate 25 and against the underface of the closure plate 22 and is welded to the respective side plate and the closure plate and these reinforcing elements serve

to secure each side plate to the adjacent end of the closure plate. The side walls **11** have spaced vertically extending corrugations **27** therein extending from the bottom thereof to the top and each side wall has one end positioned against the end wall **12** and welded thereto and one of the corrugations **27** is disposed adjacent said one end of each side wall. Each side wall **11** slightly overlaps its respective side plate **25** as best shown in Fig. 1. The roof **13** is formed with a ridge along its longitudinal center line and the end wall **12**, end plate **15**, and the closure plate **22** are also formed midway of their extremities so as to conform to the shape of the roof. The roof **13** has spaced transversely extending corrugations **28** therein extending substantially the full width of the car and one of the corrugations is disposed adjacent one end of the roof and said one end of the roof is positioned upon the closure plate **22** and secured thereto. It will be noted that each side edge of the roof **13** slightly overlaps its respective side plate **25** by welding. A plurality of inverted U-shaped segmental members **29** of a section complemental to the side wall corrugations **27** and roof corrugations **28**, are positioned upon the side plates **25** and each segmental member extends between one of the corrugations **28** in the roof and the adjacent corrugation **27** in the respective side wall and one end of each segmental member is welded to the adjacent end of its respective corrugation in the roof and the other end of each segmental member is welded to the upper end of the adjacent corrugation in the respective side wall.

From the foregoing it will be seen that there has been provided a car end plate construction which has great strength and will withstand high stresses and is especially suitable for corrugated box cars and may be applied to all other types of railway house cars.

What is claimed is:

1. In a railway house car, an end wall having vertically extending corrugations therein extending to the top thereof, an end plate channel-shaped in cross section arranged transversely of the car and having its web positioned upon the top of the end wall and secured thereto and having its ends turned downwardly and secured to the adjacent ends of the adjacent corrugations in the end wall, a closure plate positioned upon the legs of the end plate and secured thereto and the ends of the closure plate terminating at locations spaced from the turns in the ends of the end plate, side plates positioned upon the end plate at the ends of the closure plate and secured to the end plate, a pair of side walls each having one end positioned against the end wall and secured thereto and said one end of each side wall having a vertically extending corrugation therealong, a roof having a transversely extending corrugation along one end thereof and said one end being positioned upon the closure plate and secured thereto, and inverted U-shaped segmental members positioned upon the side plates and extending between the corrugation in the roof and the corrugation in the side walls and secured thereto.

2. In a railway box car, an end wall having vertically extending corrugations therein extending to the top thereof, an end plate channel-shaped in cross section arranged transversely of the car and having its web positioned upon the top of the end wall and welded thereto and having its ends turned downwardly and welded to the adjacent ends of the adjacent corrugations in the end wall, a closure plate positioned upon the legs of the end plate and welded thereto and the ends of the closure plate terminating at locations spaced from the turns in the ends of the end plate, side plates positioned upon the end plate at the ends of the closure plate and welded to the end plate, a pair of side walls each having one end positioned against the end wall and welded thereto and said one end of each side wall having a vertically extending corrugation therealong, a roof having a transversely extending corrugation along one end thereof and said one end being positioned upon the closure plate and welded thereto, and inverted U-shaped segmental members positioned upon the side plates and extending between the corrugation in the roof and the corrugation in the side walls and welded thereto.

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