June 28, 1955 H. C. KEITH 2,711,699

PRESSED STEEL SIDE FOR BOX CARS

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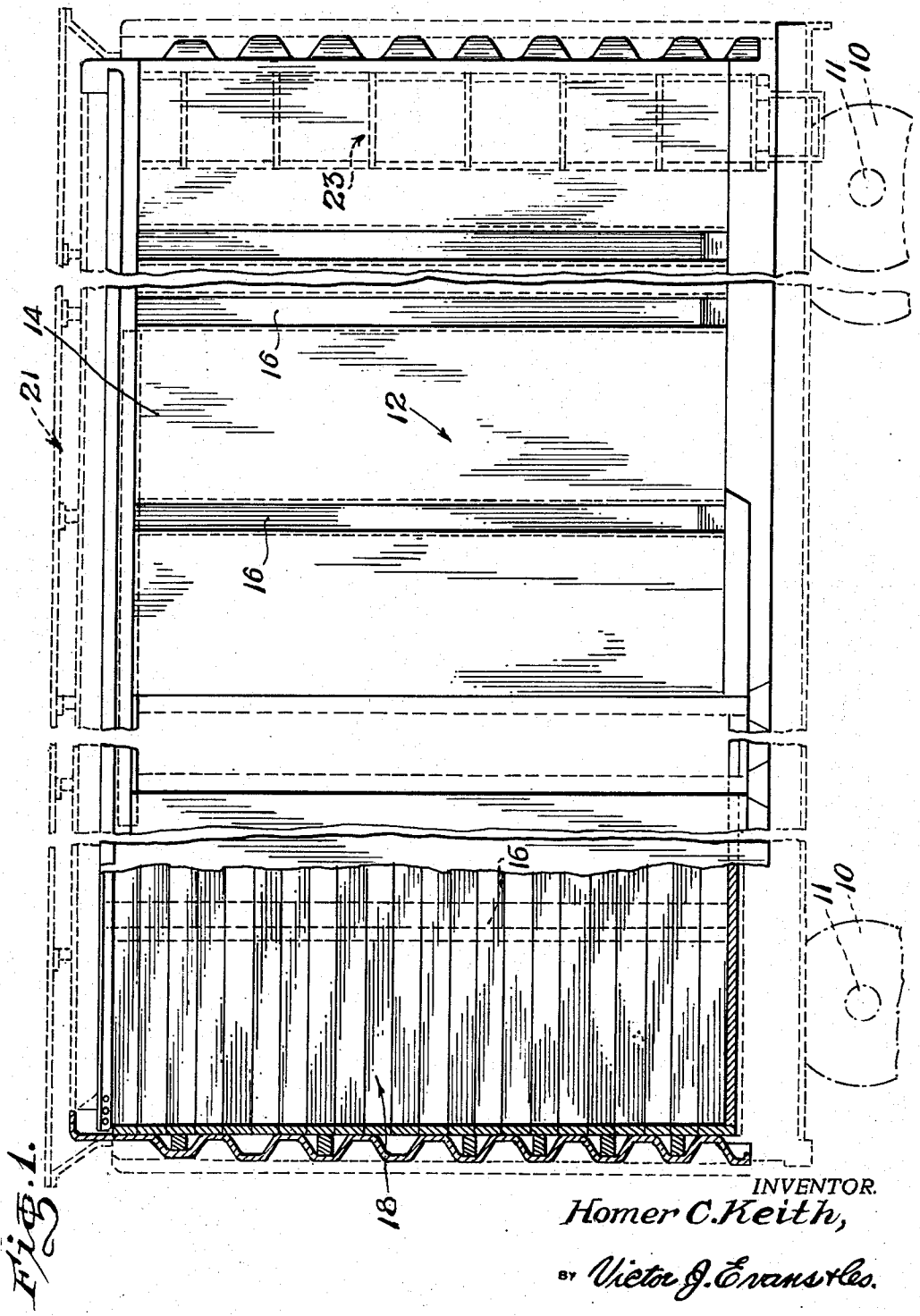


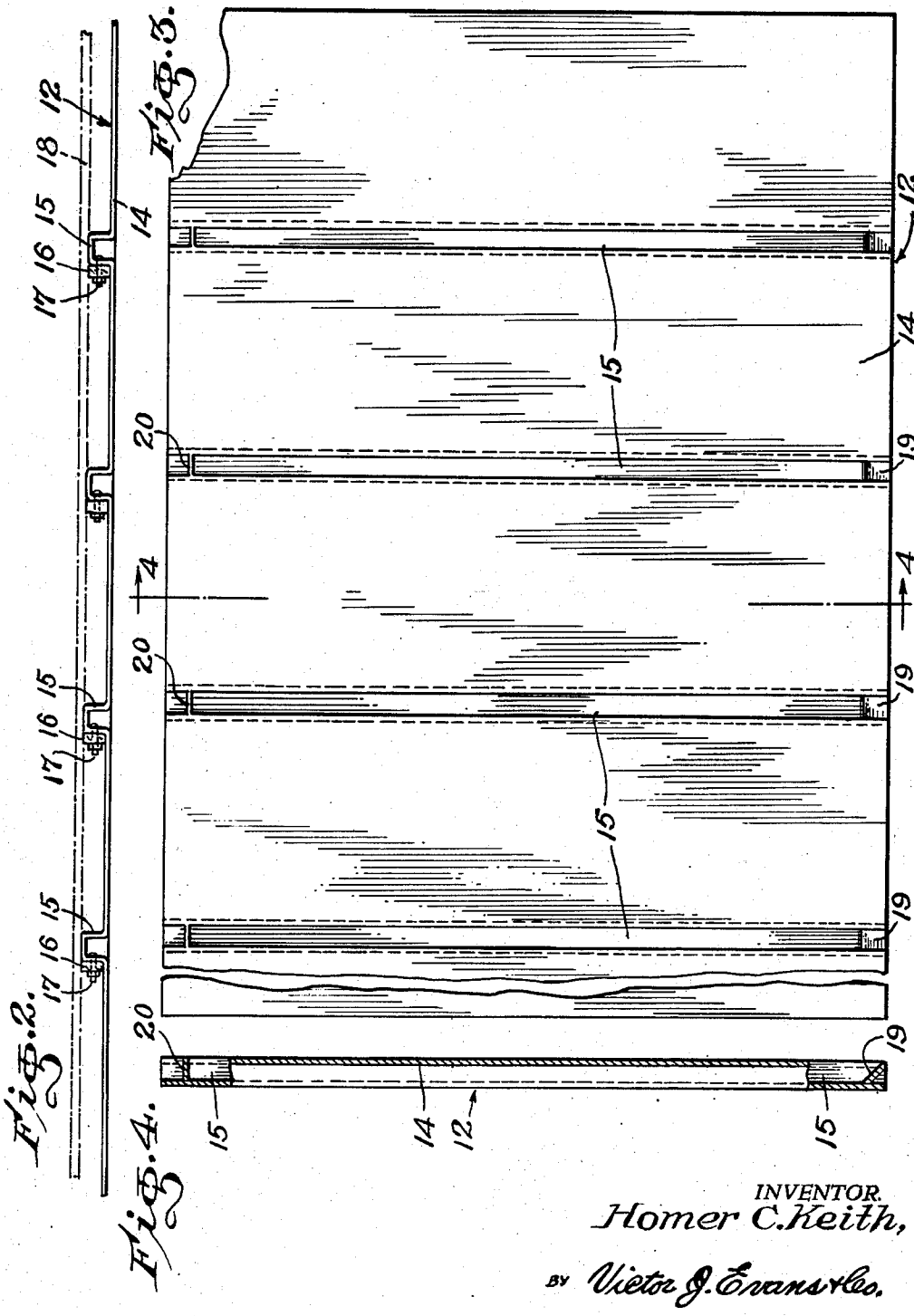
Fig. 1.

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United States Patent Office 2,711,699 Patented June 28, 1955

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PRESSED STEEL SIDE FOR BOX CARS

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Application July 27, 1953, Serial No. 370,480

1 Claim. (Cl. 105—409)

This invention relates to railway equipment, and more particularly to a box car or freight car.

The object of the invention is to provide a box car which has side members pressed or fabricated from a single piece of metal so that a plurality of units can be formed into box car sides.

Another object of the invention is to provide side members which are made of pressed steel or other metal whereby the box cars can be economically assembled.

A further object of the invention is to provide a box car side construction which is easy to manufacture and assemble.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a side elevational view of a box car, constructed according to the present invention, and with parts broken away and in section.

Figure 2 is a plan view showing one of the side members.

Figure 3 is a side elevational view of one of the side members.

Figure 4 is a sectional view taken on the line 4—4 of Figure 3.

Referring in detail to the drawings, the numeral 10 designates the conventional railway wheels of the box car, and the wheels 10 may be mounted on axles 11. The numeral 12 designates one of the side units of the box car, and each of the side units 12 may be pressed from a single piece of steel or other suitable metal. The side member 12, Figures 2 and 3, includes a body portion 14 that is shaped or pressed to provide a plurality of vertically disposed spaced parallel ribs 15. A bar 16 which may be made of wood is arranged contiguous to each of the ribs 15, and the bars 16 are secured to the ribs 15 by suitable securing elements such as rivets or bolts 17, Figure 2. The bars 16 are adapted to have secured thereto the usual lining 18 which is arranged on the inner surface of the box car.

Each of the ribs 15 is provided with an upper horizontally disposed closure plate or web 20 and a lower inclined closure plate or web 19. These plates or webs 19 and 20 may be secured in place as by welding, and the plates serve to insure that there will be no air or water entering the space defined by the ribs.

A suitable catwalk 21 may be arranged across the top of the box car, Figure 1, and ladders 23 may be arranged in the usual manner for permitting persons to gain access to the top of the box car.

From the foregoing it is apparent that a means has been provided for economically constructing box cars. This means comprises side members which are each fabricated of a single piece of pressed steel so shaped as to include a plurality of spaced corrugations or reinforcing ribs therein.

The side units 12 include the plurality of spaced parallel vertically disposed ribs 15 which each have the wooden bar 16 secured thereto so that the lining 18 can be secured to the bar 16. Any number of these pressed steel units can be used as desired.

It will be seen that the sides are formed with integral

ribs or posts and the side members extend from the ends of the box car to the corner posts of the doorways. The shape or size of the parts can be varied to suit cars that are being rebuilt and then shipped to railroad car shops to be applied by welding to the top and bottom plates and the steel ends. Any type of door construction can be used with the pressed steel sides and two of the side members 12 can be used to form a side of a car. The side members can be fastened to the door posts in any suitable manner, as for example by riveting or welding and the present invention insures that box cars can be constructed or repaired with great economy. In an A. R. A. standard 40 foot box car of conventional design there are four vertical Z bar posts between each door post and the end of the car and between the other door post and the other end of the car there are four more. The opposite side of the car has eight more making a total of sixteen posts and depending on the height of the car each Z bar post will have 38 to 46 holes for rivets. The vertical side plates for the present conventional cars will average around 32 inches in width from center to center of rivet holes. Since the edges of the sheets lap when they are riveted to the Z bar posts in the conventional cars, it will be seen that each rivet goes through three holes, one in each sheet and one in the Z bar. With the present invention wherein the posts are integral with the pressed steel sheet, the sixteen Z bar posts are eliminated so that consequently sixteen rows of rivets are eliminated and also by means of the present invention the number of holes that have to be punched is greatly reduced so that there will be effected a saving in time and money. The present invention can be used for any length of box car or to any type of construction as for example in furniture cars in which the door in the side is not in the exact center of the car.

Also, the present invention permits repairs to be made to the cars as when the cars are damaged in a wreck since any number of side sheets that have been damaged on a particular car can be replaced economically and easily since the sheets can be pressed to any specifications and shipped in any desired quantity to the points where the damaged cars are to be repaired. Further, the wood lining can be applied or replaced very easily.

As previously stated the present invention will save much money on fabrication and erection costs and also on die costs, and the continuous sections will have great strength.

I claim:

In a box car, vertically disposed spaced parallel side members, each of said side members being pressed from a single piece of metal and shaped to include a rectangular body portion including a plurality of spaced parallel vertically disposed ribs, each of said ribs having a substantial U-shape and including spaced parallel side sections and a back section, the back sections of all of said ribs being coplanar, upper horizontally disposed webs secured to said ribs, said upper webs lying in the same plane, lower webs secured to each of said ribs, said upper webs being spaced from the ends of said ribs, said lower webs being inclined, and a bar secured to each of said ribs and adapted to have a car lining secured thereto, each of said bars being arranged contiguous to a surface of one of the side sections of a rib, said ribs extending from the top to the bottom of the car, said ribs defining therebetween flat rectangular sections in said body portion.

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