

UNITED STATES PATENT OFFICE.

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BRICK-DRYING CAR.

SPECIFICATION forming part of Letters Patent No. 488,936, dated December 27, 1892.

Application filed April 26, 1888. Serial No. 271,959. (No model.)

To all whom it may concern:

Be it known that I, CYRUS CHAMBERS, Jr., a citizen of the United States, residing at Wynnewood, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Brick-Drying Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

10 Figure 1 is a side elevation of a car constructed according to my invention, brick-supporting pallets being shown in position thereon. Fig. 2 is a plan view of the car, on a reduced scale. Fig. 3 is a rear view of a part of one end of the car-frame, showing the casting for connecting the contiguous ends of the iron bar constituting said frame. Fig. 4 is an end view of Fig. 3. Fig. 5 is a horizontal section, as on line *a b*, Fig. 3. Fig. 6 is a front view of the casting at the opposite end of the car, detached. Fig. 7 is a plan view thereof. Fig. 8 is a side elevation of the same in place, the end of the car being shown in cross-section.

25 This invention relates to improvements in cars which are used more especially in connection with drying kilns; and the improvements consist, first, in constructing the body or frame of the car of a single piece of channel or wrought iron, bent at the corners and connected at or near the middle of one end, whereby certain advantages are secured, as hereinafter explained; secondly, in uniting the ends of the channel iron constituting said body or frame, with a plate or casting which fits snugly within the hollow or channel between the flanges of said iron, thereby bringing the ends of said iron straight and in line, and rigidly connecting the same; thirdly, in providing said casting with a central head or projection, whereby it, said casting, is adapted to perform the double functions of a splice plate and bumper head; fourthly, in providing the said head or projection on said casting, with an opening or hole into which a hook or tongue may be inserted by which to draw or pull the car, whereby said casting serves the purposes of a splice-plate, a bumper-head and a draw-head; fifthly, in providing said casting with a flange or flanges extending laterally from, and in line with, the

edge or edges of, the hole in the central head or projection of said casting, whereby said hook or tongue may be readily guided into said hole, and whereby the casting will be stiffened and reinforced; sixthly, in forming, adjacent to said reinforcing and guiding flange or flanges, the bolt holes through which pass the bolts that unite said casting and iron frame, whereby the heads of said bolts will come close to said flange or flanges and be thereby prevented from turning; seventhly, in correspondingly "staggering" the bolt holes in said casting and frame, whereby the holes will register irrespective of the way the casting shall be turned; and, eighthly, in providing the casting, at the points thereof which come into contact with the junction of the ends of the iron constituting the frame, with indentations or recesses, into which project any burrs or fins formed in cutting off the iron bars, whereby the said casting will fit up snugly to the body of the iron, and bring the ends thereof perfectly straight and in line without the necessity of dressing off such burrs or fins.

Referring to the annexed drawings, A represents the body of the car which is supported upon flanged wheels B, that travel on the rails C. This body is composed of a single bar of channel or wrought iron, *a'*, bent into rectangular form, as shown, and connected at or near the middle of one end, so as to make the two sides, *a³*, and one end, *a⁴*, continuous and rigid, or without joints, whereby said body is kept square and the sides thereof strong and cable of supporting the load, X, Fig. 1, distributed over the car. The splice or point of junction of the ends of the iron bar *a'* is where the least strain is on the car when loaded.

D is a casting, of the peculiar form shown, for uniting the ends of said bar *a'*. Its construction is such that it performs the functions of a splice-plate, a bumper and a draw head, and is as follows: *d'* is a plate which fits snugly within the hollow or channel, *a³*, of the bar *a'*, and against the contiguous ends, *a⁶*, thereof, whereby said ends are brought straight and in line. This plate is provided with holes, *d²*, whereby it may be securely bolted to said bar, and with a central, horizontally-perforated projection, *d³*, which

extends beyond the flanges, a^7 , of said bar. This projection, d^3 , acts as a bumper-head, as against it the blow is taken when the cars are run together. It also serves the purpose of a draw-head, as a hook or tongue, by which to draw or push the car, may be readily inserted in the horizontal hole, d^4 , therein. On the upper and lower sides of the head d^3 , extending laterally therefrom in opposite directions, are formed flanges or ribs, d^5 , whose inner edges, d^6 , are in line with the inner edge of the hole d^4 in said head. These flanges not only serve to guide said tongue or hook into the hole d^4 , but to reinforce and stiffen the casting. The bolt holes d^2 in the plate d' , and those, a^8 , coinciding therewith, in the frame A, are staggered, as shown, so that they will register, irrespective of the way the casting shall be turned.

d^7 are bolts which pass through these holes d^2 , a^8 , and unite said casting and frame. These bolts are prevented from turning by the flanges d^5 coming just alongside the bolt holes d^2 and close to the bolt heads, which are preferably square. (See Fig. 3). I prefer to use four of these bolts,—two in each end, a^9 , of the bar a' , as shown.

By the above described construction, it will be seen, that no matter which edge of the casting is placed uppermost, or which end foremost, it will fulfill all the conditions.

In the center of the casting, on the side and edges thereof which come into contact with the iron a' , are formed indentations, or recesses, d , into which project any burrs or fins which may have been made in cutting off the iron-bars preparatory to bending the same to form the car body. In this way, the plate d' will fit up close to the body of the bar a' , and bring the ends thereof perfectly straight and in line, without the necessity of dressing off the fins, which would otherwise be requisite.

The casting, D' , at the solid or integral end, a^4 , of the car is provided, similarly with the other casting D, with a horizontally-perforated projection, d^3 , which likewise serves the purposes of a bumper and draw head, but as it, said casting D' , has no splicing to do, it is made comparatively short, and is only flanged or lipped on one side of the hole d^4 , in order to guide the hook or tongue therein. This short casting is secured to the bar a' by means of a square-headed bolt which passes through a hole, d^9 , in an offset portion, d^{10} , at the top of the projection, the sides d^{11} , of the offset preventing the bolt from turning.

The sides, a^3 , of the frame or body A, are connected, stiffened and prevented from

spreading, by means of a central brace or cross-bar E.

The pedestals, F, carrying the roller journal boxes are bolted to the inner or plain sides of the channeled frame, and, of course, at such a distance from the ends of the car as to prevent the latter from tilting when loaded at one end only.

The hereinbefore described car is designed, more especially, to carry pallets, X, whereon the bricks are set edgewise, preparatory to transportation to the drying kilns or chambers. The construction of these pallets is immaterial in connection with the present invention, and may form the subject of a future application for Letters Patent.

Having thus described my invention, I claim as new and wish to secure by Letters Patent—

1. The combination with the iron car-body, of the splice-plate provided with the central projection or bumper-head, substantially as and for the purpose set forth.

2. The combination with the iron car-body, of the splice-plate provided with the perforated projection or bumper-head, substantially as and for the purpose set forth.

3. The combination with the iron car-body, of the splice-plate provided with the central projection having a horizontal hole therein, and the flange or flanges for guiding a tongue or hook into said hole, substantially as and for the purpose set forth.

4. The combination with the iron car-body, of the splice-plate provided with the projection having a horizontal hole therein, and the flange or flanges for guiding a tongue or hook into said hole, together with the bolt holes adjacent to said flanges, substantially as and for the purpose set forth.

5. The combination with the iron car-body, of the splice-plate provided with the projection having a horizontal hole therein, and the flange or flanges formed with relation to said hole, together with the staggered bolt holes, substantially as and for the purpose set forth.

6. The combination with the car-body composed of a single piece of iron bent into shape, of the splice plate provided with the recesses d , substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 11th day of April, A. D. 1888.

CYRUS CHAMBERS, JR.

Witnesses:

ISABEL CHAMBERS,
MARY P. CHAMBERS.