(No Model.)

E. F. GOLTRA & M. B. SCHAFFER.

CAR TRUCK BOLSTER.

No. 504,029. Patented Aug. 29, 1893.

Fig. I.

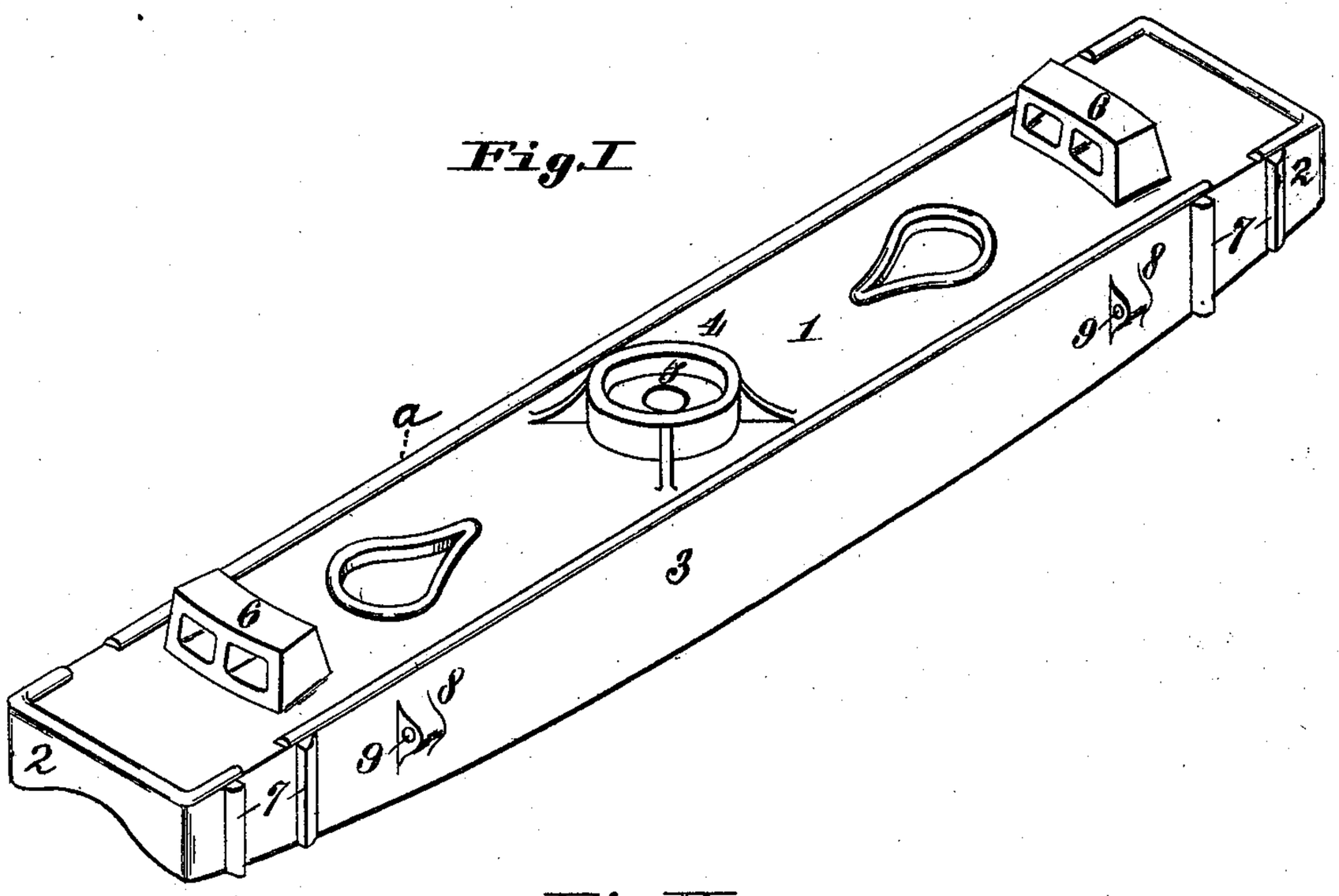
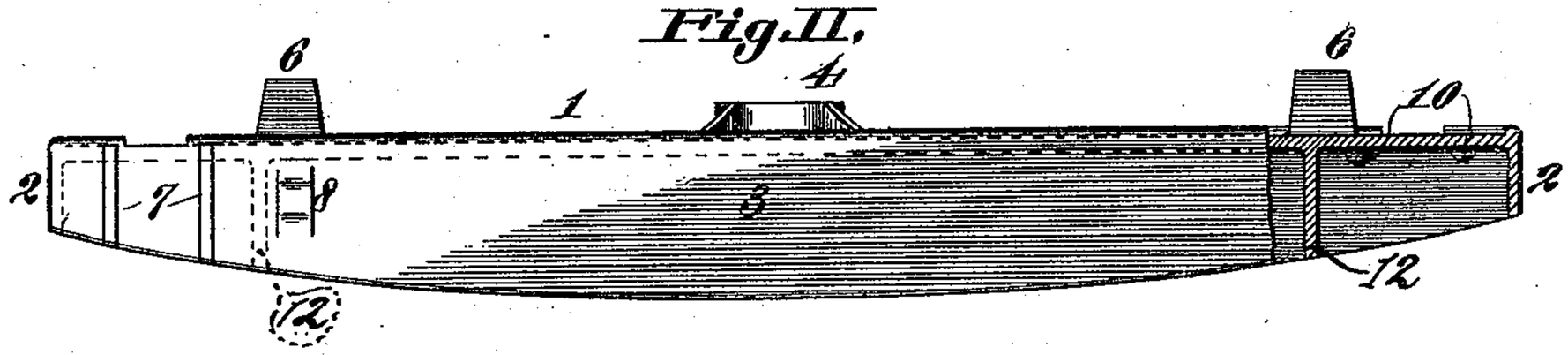


Fig. II.



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UNITED STATES PATENT OFFICE.

EDWARD F. GOLTRA AND MORSE B. SCHAFFER, OF ST. LOUIS, MISSOURI.

CAR-TRUCK BOLSTER.

SPECIFICATION forming part of Letters Patent No. 504,029, dated August 29, 1893.

Application filed January 21, 1893. Serial No. 459,219. (No model.)

To all whom it may concern:

Be it known that we, EDWARD F. GOLTRA and MORSE B. SCHAFFER, of the city of St. Louis, State of Missouri, have invented a new and useful Improvement in Car-Truck Bolsters, of which the following is a full, clear, and exact description.

Our invention relates to cast car truck bolsters, and it consists substantially as hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure I is a view in perspective showing our improved bolster in its preferred shape; and Fig. II a side elevation of the bolster, a portion of one end thereof being broken away, and at that point the bolster is shown in vertical, longitudinal section.

The same letters and numerals of reference denote the same parts.

Referring to the drawings, 1 represents the bolster-top or web, 2 the ends, and 3 the sides. The sides 3 at their lower edges are preferably made arched or convex, to form a truss for strengthening the beam to better sustain the weight of the car and its contents. The sides extend above the top at *a*. 4 is a circular bearing plate around the king bolt opening 5, and 6 are bearing plates for the car body.

On the sides 3 are guides 7, between which the supporting pillars fit.

8 are bosses with openings 9, from which the hangers or the brake shoes are supported.

10 represents bosses on the inner, under side of the bolster web, where the car springs are adapted to be seated, to hold the springs in place.

The prime object of our invention is to form a practical cast truck bolster with its appurtenances cast thereon, so as to avoid the use of bolts, rivets or separate pieces, and thereby form a truck bolster that is substantially integral throughout, and almost impossible to become deranged or impaired through the displacement of any of its parts. By means of a bolster constructed in accordance with our invention, the car springs are well placed in position, and by using an inverted channel spring plank, such as now employed, the springs are supported securely.

12 represents integral ribs connecting the sides 3, and one or more of which may be used. We have shown two, one near each end of the bolster. Said ribs extend crosswise in the bolster at a point or points between its ends and connect the web and sides (or girders as they may be indifferently termed) integrally. Such cross rib may extend entirely across from side to side, or it may assume the form of corner pieces or brackets at the opposite side corners respectively of the bolster, and, in such cases, serve to connect the sides indirectly with the aid of the central portion of the connecting web. But in all cases the sides and web are connected integrally. They furthermore serve to prevent the deformation of the bolster in use and also to support the web which in turn usually supports the center and side bearings. They are also of use metallurgically in that in casting the bolster they serve, when the bolster is cooling, to hold the sides vertical, and to prevent them from flaring and warping out of shape. They further assist, when arranged as shown, and in conjunction with the ends 2, in forming pockets for holding the springs, obviating, if desired, the use of spring plates. These cross ribs for the purposes named, are useful irrespective of the exact location of the bolster web. This last named part, the web, we however prefer to connect with the bolster sides below the top thereof, and for the following reasons: Our bolster being a casting, and usually of steel, a certain amount of the material of the walls of the mold is abraded in founding and floats, and is carried to the top of the mold, and were it not that the sides of the bolster are extended above the junction of the dies with the web, the structure would be materially weakened at such junction. That important part of the structure would be formed partly of the scoria referred to. But by extending the sides above the web, room is provided for floating the scoria well above the junction of the sides and web. Moreover, the extension of the sides above the web materially strengthens and benefits the structure, and the lower the web the deeper can be the transom used in conjunction with the bolster. Said side-extension can also be notched, as shown, to receive and hold in place the top arch-bar. In case of the accidental displacement of the car-truck, the bolster-sides would receive the shock of the falling car body, rather than the

web. For the purposes named the web can be joined to the sides at any suitable point below the top of said sides. We prefer the arrangement shown.

We claim—

1. In a car truck bolster, the combination of a web and girders, said web and girders being cast in one piece, and said web being wholly or partly below the top of said girders.

2. In a car truck bolster, the combination of a web and sides, said web and sides being cast in one piece, and said bolster having integral side-bearings, and said sides being united beneath the tops of said side-bearings by means of said web.

3. In a car truck bolster, the combination of a web and girders, said web and girders, at a point or points between the ends of the bolster, having integral cross-ribs, substantially as described.

4. In a car truck bolster, the combination of a web and sides, said bolster having center and side-bearings, said sides, wholly or in part throughout their length, extending above said web, said sides, at a point or points between the ends of the bolster, being connected by cross-ribs with said web, and said sides, web, bearings and ribs being an integral casting.

EDWARD F. GOLTRA.
MORSE B. SCHAFFER.

In presence of—
ALBERT M. EBERSOLE,
E. S. KNIGHT.