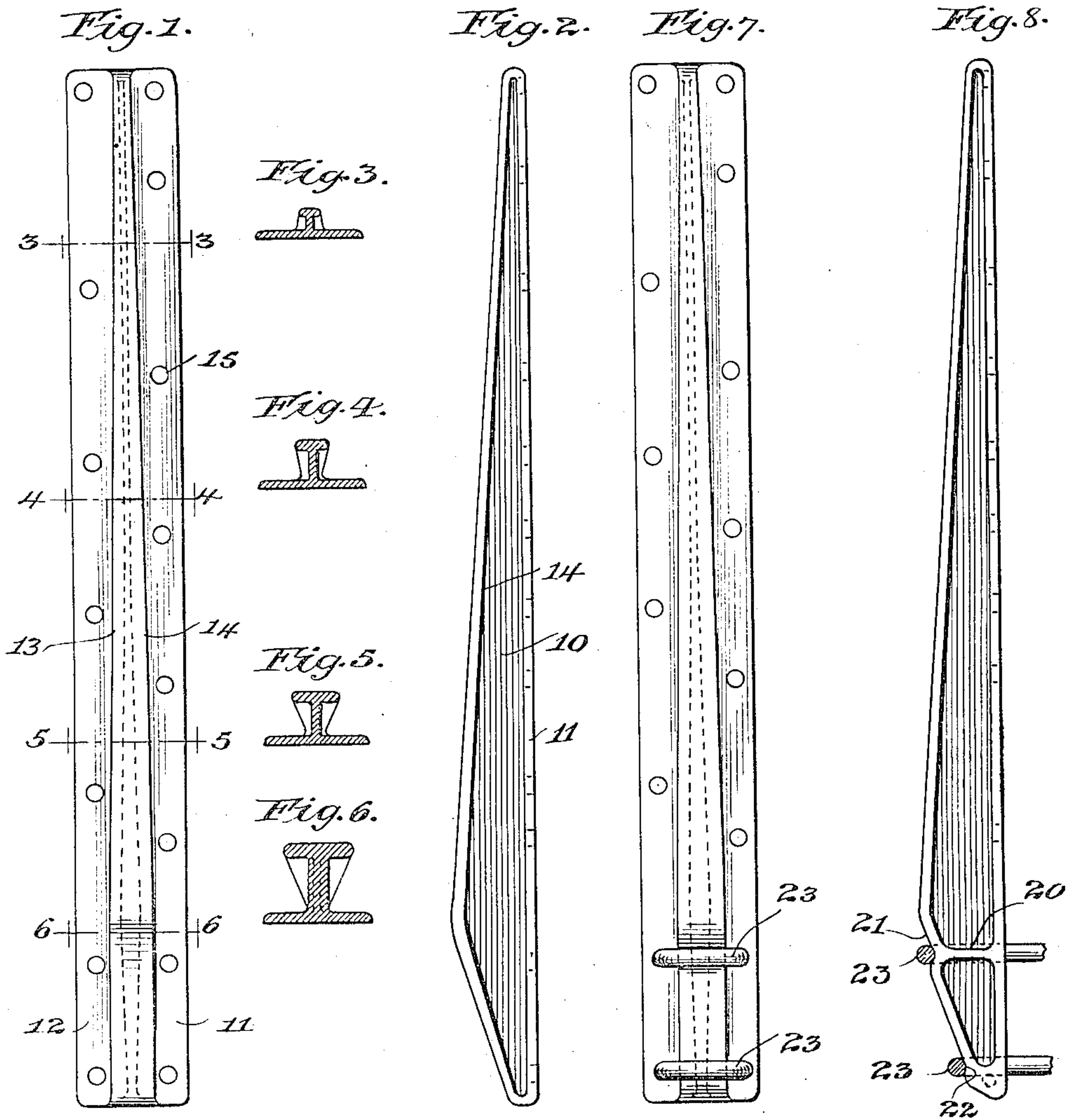


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E. I. DODDS.
CAR STAKE.

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CAR-STAKE.

No. 831,651.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ETHAN I. DODDS, a citizen of the United States, residing at Pullman, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Stakes, of which the following is a specification.

My present invention relates to car-stakes, and is more especially directed to cast-metal stakes such as are proportioned and shaped to properly withstand the strains to which they may be subjected without the use of surplus metal. The greatest strain on a side stake is at a point on a level with the top of the side sill in the case where the stake is bolted to the sill, and the strain gradually decreases toward the ends. In order, therefore, to make a stake of a shape to withstand the strains and not use any more metal than is required, I provide the inner edge of the stake with the ordinary integral oppositely-extended flanges, the outstanding web tapering both in thickness and width toward both ends, and at the outer edge of the web are integral oppositely-extended flanges which taper toward the top of the stake. In some cases I find it desirable to provide one or more additional transverse ribs joining the outer and inner flanges at or near the widest part of the web, which is substantially on a level with the top of the side sill when the stake is in place. If the stake is to be held in place by U-bolts or similar devices, I may form one or more depressions or grooves on its outer surface for the reception of the bolt or the like.

In the accompanying drawings I have illustrated one embodiment of my invention, wherein—

Figure 1 is a face view of the stake. Fig. 2 is an edge view of the same. Fig. 3 is a cross-section on the line 3 3 of Fig. 1. Fig. 4 is a cross-section on the line 4 4 of Fig. 1; Fig. 5, a cross-section on the line 5 5 of Fig. 1; Fig. 6, a cross-section on the line 6 6 of Fig. 1. Fig. 7 is a face view of a modified form of stake, and Fig. 8 is an edge view of the same.

Referring first to Figs. 1 to 6, inclusive, 10 designates the outstanding web of the stake, at the inner edge of which are the oppositely-extended flanges 11 and 12. The web 10 is widest near its lower end approximately on the line 6 6 of Fig. 1 and tapers in width toward the base or inner flanges 11 12 as it ex-

tends toward the ends of the stake. The web 10 also tapers in thickness toward the ends of the stake, being thickest at approximately the point where it is intersected by the line 6 6. It is at this point that the stake receives its greatest strains, and for this reason it is there made thickest and widest.

The outer edge of the web is provided with oppositely-extended flanges 13 and 14, which are considerably narrower than the base-flanges 11 and 12 and whose outer edges converge as they extend upwardly from the line 6 6 toward the end of the stake, the lower outer edges of the flanges being approximately parallel from the line 6 6 to the lower end of the stake.

The base-flanges are provided with holes 15 (shown on Fig. 1) for the purpose of attachment by bolts or otherwise to the side or end sill and side or end of the car.

In the modified form of stake shown in Fig. 7 the base-flanges and the outstanding web are substantially the same as those shown in Figs. 1 to 6, inclusive; but at the broadest point of the web I provide one or more transverse webs 20, joining and strengthening the inner and outer flanges. On the outer side of the stake I provide one or more depressions or seats 21 and 22 for the reception of U-bolts 23, which may be used for securing the stake to the side of the car. If desired, the outer flanges may be somewhat thickened at the point just below the lower U-bolt, as shown in Fig. 8.

It is apparent from the above description and the drawings that my invention provides an improved form of car-stake which is properly proportioned to withstand strains, at the same time securing comparative lightness through avoidance of surplus metal. It is of course readily seen that such stakes may be used on the sides or end of a car or for analogous purposes.

It is obvious also that mere mechanical and minor changes may be made in the form and structure without departing from the substance of my invention as set forth in the following claims.

This patent is intended to embrace only so much of the disclosure made herein as is covered by the claims.

I claim—

1. A stake for a car, having a web provided

at one edge with a flange, and at its opposite edge with a tapering flange, substantially as described.

2. A stake for a car, having a web provided
5 at one edge with oppositely-extended flanges, and at its opposite edge with oppositely-extended tapering flanges, substantially as described.

3. A stake for a car, having a web tapering
10 in width provided at one edge with a flange and at its opposite edge with a tapering flange.

4. A stake for a car, having a web tapering
15 in width provided at one edge with oppositely-extended flanges, and at its opposite edge with oppositely-extended tapering flanges, substantially as described.

5. A stake for a car, having a web tapering
20 in thickness provided at its two opposite edges with flanges of different widths, substantially as described.

6. A stake for a car, having a web tapering
25 in thickness and provided at one edge with a flange, and at its opposite edge with a tapering flange, substantially as described.

7. A stake for a car, having a web tapering
30 in thickness, and provided at one edge with oppositely-extended flanges, and at its opposite edge with oppositely-extended tapering flanges.

8. A stake for a car, having a web tapering
35 in width and thickness for the greater portion of its length, provided at its inner and outer edges with flanges, substantially as described.

9. A stake for a car, having a web tapering
40 in width and thickness, and provided at one edge with a flange, and at its opposite edge with a tapering flange, substantially as described.

10. A stake for a car, having a web tapering
45 in width and thickness and provided at its inner edge with oppositely-extended flanges, and at its outer edge with oppositely-extended tapering flanges, substantially as described.

11. A stake for a car, having a web tapering
50 in width toward each end, and having flanges on its two opposite edges, substantially as described.

12. A stake for a car, having a web tapering
in width toward each end, and provided

at one edge with a flange and at its opposite edge with a tapering flange, substantially as described.

13. A stake for a car, having a web tapering
55 in width toward each end and provided at its inner edge with oppositely-extended flanges, and at its outer edge with oppositely-extended tapering flanges.

14. A stake for a car, having a web tapering
60 in thickness toward each end, and provided on its opposite edges with flanges, substantially as described.

15. A stake for a car, having a web tapering
65 in thickness toward each end, and provided at one edge with a flange, and at its opposite edge with a tapering flange, substantially as described.

16. A stake for a car, having a web tapering
70 in thickness toward each end and provided at its inner edge with oppositely-extended flanges, and at its outer edge with oppositely-extended tapering flanges.

17. A stake for a car, having a web tapering
75 in both width and thickness toward each end, and provided on its two opposite edges with flanges.

18. A stake for a car, having a web tapering
80 in both width and thickness toward each end and provided at one edge with a flange, and at its opposite edge with a tapering flange.

19. A stake for a car, having a web tapering
85 in both width and thickness toward each end, and provided at its inner edge with oppositely-extended flanges, and at its outer edge with oppositely-extended tapering flanges.

20. A stake for a car, having a web tapering
90 in width toward both ends, and having flanges on its opposite edges, and one or more transverse ribs connecting the flanges at approximately the widest portion of the web.

21. A stake for a car, having a web tapering
95 in width toward both ends and having flanges on its opposite edges, and one or more transverse ribs connecting the flanges at approximately the widest portion of the web, said stake having one or more depressions on its outer edge for the reception of U-bolts.

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