No. 825,029. PATENTED JULY 3, 1906.

E. I. DODDS.

CAR STAKE.

APPLICATION FILED JULY 31, 1905.

Fig. 1.

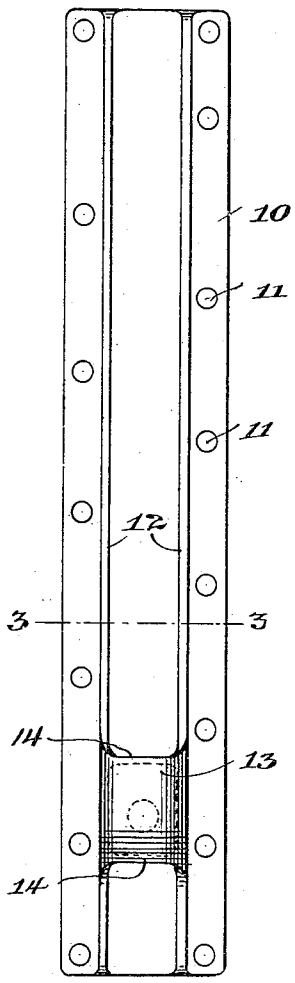



Fig. 3.

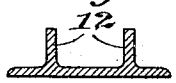



Fig. 4.




Fig. 2.

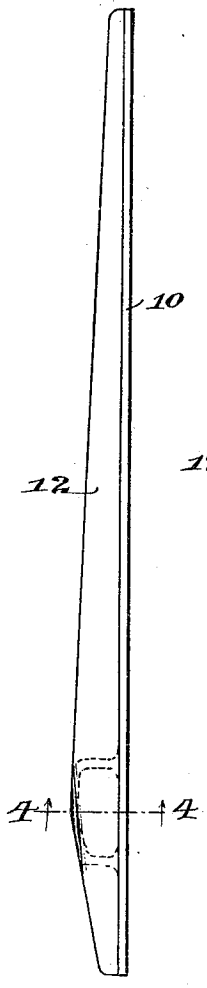
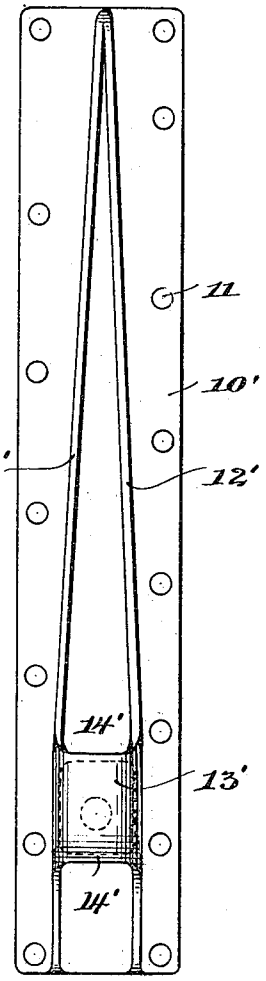



Fig. 5.




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# UNITED STATES PATENT OFFICE.

ETHAN I. DODDS, OF PULLMAN, ILLINOIS, ASSIGNOR TO THE PULLMAN COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## CAR-STAKE.

No. 825,029. Specification of Letters Patent. Patented July 3, 1906.

Application filed July 31, 1905. Serial No. 272,052.

*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.

The proportioning of the parts of a car-stake so as to use the least amount of metal and yet at the same time produce a stake which will most effectually withstand the strains put upon it involves particularity and discrimination in the distribution of the metal. Since the strains on the stake are the greatest near its lower part at or near the level of the upper surface of the side sill and decrease toward each end, the metal of the stake and its ribs should be proportioned accordingly.

My present invention relates to such stakes, and comprises a base-plate which is fastened to the sill and to the side or end of the car. Outstanding from this base-plate are two longitudinal ribs, each tapering toward the base as it approaches the ends thereof, and in one form of this device these ribs also converge. Uniting these ribs at their widest part—that is, at the point where they are subjected to the greatest strain—are one or more transverse webs and an integral connecting outer portion or back, which joins the outer edges of the ribs or webs.

In the accompanying drawings I have illustrated two forms of stakes involving my invention.

Figure 1 is the face view of one form of the stake. Fig. 2 is an edge view thereof. 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. 2, and Fig. 5 is a face view of a modified form of stake.

10 designates a rectangular base-plate which has holes 11 along its edges, so that it may be secured to the sill and to the side or end of the car. Base 10 is provided also with the outstanding longitudinal ribs 12 12, which are widest near the lower portion, approximately on the line 4 4, and taper toward the base as they approach the opposite ends thereof. Near their widest portions they are joined together by transverse webs 14 14 and also an outer rounded integral connecting portion or back 13, which also joins the outer edges of the transverse webs. It will be seen from this construction that I have devised a stake which is properly proportioned to withstand the strains put upon it, since it has the widest portions of its ribs at approximately the top of the side sill when it is fastened thereto by bolts or otherwise.

The stake shown in Fig. 5 is provided with a base 10′, holes 11′ along its edges, longitudinal ribs 12′, together with transverse webs 14′, and the rounded back 13′, all of which are like the parts shown in Fig. 1, with the exception that the ribs 12′ instead of being parallel for their entire length converge upwardly from their widest portion until they meet at the upper end of the stake.

From the foregoing it will be seen that in my invention I have produced a cast-metal car-stake which has the advantages of great strength and comparatively light weight, yet is sufficiently strong for its purpose, because its metal is so distributed as to effectively withstand the strains to which it is subjected. Such a cast-metal stake combines a maximum of strength with a minimum of metal and weight and obviously has advantageous features other than those specified.

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

I claim—

1. A car-stake having a base-plate, integral longitudinal ribs, and an integral connecting portion uniting the outer edges of the ribs for a portion of their length, substantially as described.

2. A car-stake having a base-plate with integral longitudinal ribs, and a rounded integral connecting portion uniting the outer edges of the ribs for a portion of their length, substantially as described.

3. A car-stake having a base-plate with integral longitudinal ribs tapering toward the base as they approach the ends thereof, and an integral connecting portion uniting the outer edges of said ribs at their widest parts, substantially as described.

4. A car-stake having a base-plate with integral longitudinal ribs tapering toward the base as they approach the ends thereof, one or more webs uniting the ribs near their widest parts, and a connecting portion uniting the outer edges of the ribs and the web or webs, substantially as described.

5. A car-stake having a base-plate with integral longitudinal ribs which converge as

they extend toward the upper end of the base, and a connecting portion uniting the outer edges of said ribs for a portion of their length, substantially as described.

6. A car-stake having a base-plate with integral longitudinal ribs which converge as they extend toward the upper end of the base, one or more transverse webs joining said longitudinal ribs, and an integral connecting portion uniting the outer edges of said longitudinal ribs and transverse web or webs, substantially as described.

7. A car-stake having a base-plate with integral longitudinal ribs which converge as they extend toward the upper end of the base, and which taper toward the base as they extend toward the ends thereof, substantially as described.

8. A car-stake having a base-plate with integral longitudinal ribs which converge as they extend toward the upper end of the base, and which taper toward the base as they approach the ends thereof, and an integral connecting portion uniting the outer edges of said ribs for a portion of their length, substantially as described.

9. A car-stake having a base-plate with integral longitudinal ribs which converge as they extend toward the upper end of the base, and which taper toward the base as they approach the ends thereof, one or more transverse webs uniting said longitudinal ribs near their widest portions, and an integral connecting portion uniting the outer edges of said longitudinal ribs and transverse web or webs, substantially as described.

In testimony that I claim the foregoing as my invention I have hereunto subscribed my name in the presence of two witnesses.

ETHAN I. DODDS.

Witnesses:
FREDERICK C. GOODWIN,
WALTER M. FULLER.