No. 848,103. PATENTED MAR. 26, 1907.

G. L. HARVEY.

VEHICLE STAKE.

APPLICATION FILED OCT. 11, 1906.

2 SHEETS—SHEET 1.

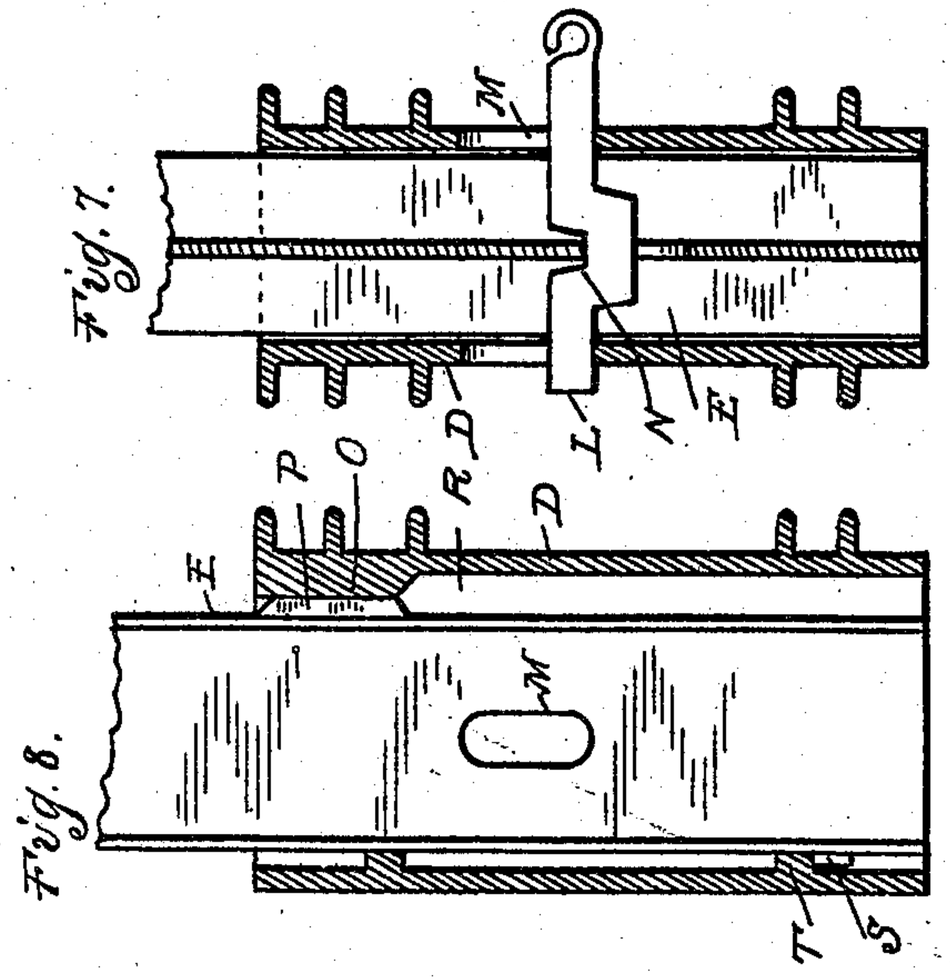

Fig. 7.

Fig. 8.

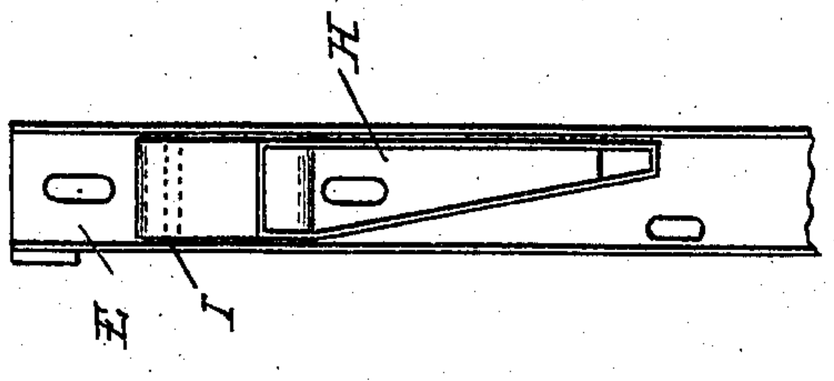

Fig. 5.

Fig. 2.

Fig. 1.

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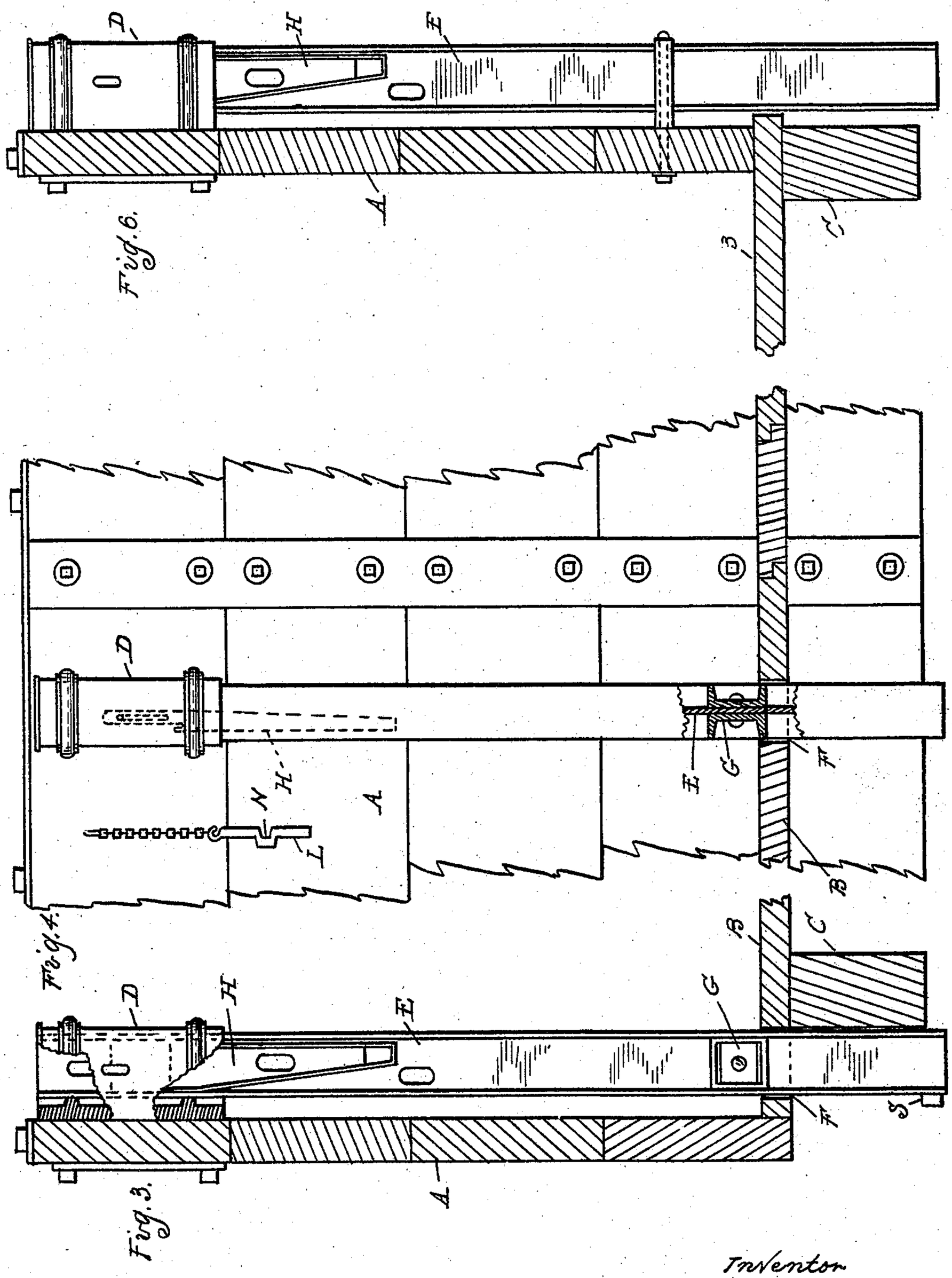

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UNITED STATES PATENT OFFICE.

GEORGE L. HARVEY, OF CHICAGO, ILLINOIS.

VEHICLE-STAKE.

No. 848,103. Specification of Letters Patent. Patented March 26, 1907.

Application filed October 11, 1906. Serial No. 338,524.

To all whom it may concern:

Be it known that I, GEORGE L. HARVEY, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vehicle-Stakes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to vehicle-stakes, having more particular reference to stakes used in connection with gondola cars.

It is one of the objects of the invention to obtain a construction in which the stake may be extended to a height greater than that of the sides of the car and when not in use may be stored adjacent to said sides.

It is a further object to obtain a simple, inexpensive, and strong construction.

The invention therefore consists, first, in the peculiar construction of an extensible stake; second, means employed for securing the same to the sides of the vehicle, and, further, in the peculiar construction, arrangement, and combination of parts, as hereinafter set forth.

In the drawings, Figure 1 is a side elevation of a portion of a gondola car, showing the stake attached thereto and in extended position. Fig. 2 is a section at right angles to Fig. 1. Figs. 3 and 4 are similar views to Figs. 1 and 2, showing the stake in lowered position. Fig. 5 is an elevation of the upper end of the stake with the extension-section in collapsible position. Fig. 6 is a view similar to Fig. 3, showing the stake applied to the outside of the car side; and Figs. 7 and 8 are vertical sections through the pocket member respectively in planes longitudinal and transverse of the car.

A is the side of a gondola car, B the floor thereof, and C the side sills. In the construction illustrated in Figs. 1 to 3 my improved stake is secured to the inner face of the side A and in lowered position drops down with its lower end passing through an aperture in the floor B to the bottom of the sill C. To permit of this movement, the pocket or holder for the stake is secured to the upper portion of the side A and preferably comprises a rectangular casing D, bolted or otherwise secured to said side A. The stake E is in telescopic engagement with this pocket member D and is preferably a flanged bar, such as an I-beam. This when lowered will pass through the aperture F, which is preferably rectangular, in the car-floor, and to fill the space between the flanges of the stake a block G is riveted thereto.

The construction as above described will permit of raising the stake a distance above the top of the car side substantially equal to the width of said side; but with many constructions of cars having low sides this length of the stake is insufficient. I have therefore provided an extension member for the stake, preferably of the following construction.

H is an extension member which at its lower end is provided with a shank fitting between the flanges of the main stake. This member H is preferably secured to the stake member E by a pin or bolt I, passing through a slot J in the shank and also passing through the flanges of the member E. The portion of the member H above the shank is preferably slightly offset and has a hook or bevel K formed thereon for engaging the upper edge of the web of the stake E. When this hook is in engagement with the web, the shank of the member H will project downward, so that the pin I is at the upper end of the slotted member J, and this will lock the member H against the web of member E and prevent lateral movement. If, however, the member H is raised until the pin I is at the lower end of the slotted bearing J, the member H may then be swung around the pin I, acting as a pivot, until it extends downward and is stored between the flanges of the member E. The member E may then be lowered in the pocket member D, and inasmuch as the extension H is entirely within the channel of the member E it will pass into the pocket D without obstruction.

The stake E is held in raised position preferably by a locking-pin L, which is inserted through apertures M in the pocket member D and a registering aperture in the web of the member E. To lock the pin from accidental disengagement, it is preferably bent or formed with a notch N therein, which will engage with the web of the member E and will thereby lock the pin from being withdrawn.

The pocket member D preferably has a bearing O at its upper end, against which a lug P on the member E bears to hold the stake in vertical position. Beneath this bearing O is a clearance-space R, which as the stake is

lowered permits of angular adjustment, so as to relieve the lateral stress of the load upon the stake during the operation of the lowering.

In operation when the stake is not in use it extends downward through the aperture F in the floor of the car, as has been described, and in this position the filling-block G prevents leakage from the car. To recess the stake, it is moved upward telescopically in the pocket member until further movement is prevented by the engagement of a stop S with a coöperating stop T on the pocket. The pin L is then inserted through the registering apertures in the pocket member D and the web of the member E and the stake lowered sufficiently to engage with the notch N of the pin. Where desired, the stake may be further extended by swinging the member H about the pin I until it projects upward beyond the end of the member E. It is then dropped until the pin I is at the upper end of the slotted bearing J, in which position lateral movement of the member H is prevented. To lower the stake, the extension member H is first turned down, after which the stake is slightly raised, the pin I withdrawn, and then the member E dropped until the folded extension member H passes completely within the pocket D. It will be observed that the pocket member D completely surrounds the stake, and therefore operates as a guide, which prevents chafing of the stake against the sides of the car.

While I have described the stake as applied to gondola cars, it is obvious that it is applicable to other uses.

What I claim as my invention is—

1. The combination with a gondola car, of a folding stake therefor comprising an open-ended pocket member secured to the upper portion of the car side, and a stake slidable through said pocket and through an alined aperture in the bottom of the car.

2. The combination with a gondola car, of a folding stake therefor comprising a rectangular open-ended pocket member secured to the upper portion of the side of the car, and a stake slidable through said pocket member and an alined aperture in the car-bottom.

3. A car-stake provided with a folding extension member, movable in a plane parallel to the side of the car and held from displacement transversely of said plane.

4. The combination with a vehicle-stake, of a vertical extension-section therefor folded within the dimensions of the cross-section of the stake.

5. The combination with a vehicle-stake, of a vertical extension-section therefor hinged thereto and confined in folded position within the dimensions of the cross-section of the stake.

6. The combination with a pocket member, of a stake telescopically engaging said pocket member and a folding extension for said stake adjustable therewith into said pocket member.

7. The combination with a gondola car, of a stake vertically extensible above the sides of said car at distance greater than the width of the sides, and means for collapsing said stake to store the same below the top of the car side and without projecting beneath the car.

8. The combination with a flanged car-stake, of an extension-section therefor hinged between the flanges of said stake to swing from an upwardly-projecting to a downwardly-projecting position, and means for locking said extension member from lateral movement when in its upwardly-projecting position.

9. The combination with a flanged car, of a stake therefor vertically adjustable through an aperture in the car-floor and a filler-block between the flanges of the stake for closing the aperture in said car-floor.

10. The combination with a pocket member, of a stake adapted to be lowered partially through said pocket member, and an extension folding end secured to said stake.

11. A vehicle-stake comprising a stake member with means for securing the stake in place, permitting of raising and lowering, and an extension folding end secured to the stake.

12. A vehicle-stake, means for securing said stake in a vertical position permitting of folding the same in a plane parallel with the side of the vehicle and an extension folding end secured to the stake also movable in a plane parallel with the side of the vehicle, and rigidly held from displacement transversely of said plane.

13. In a car-stake, the combination of telescopically-engaging and relatively vertical movable members, of a notched pin insertible through registering apertures in said members, and a portion on one of said members for engaging the notch of said pin by a downward movement.

14. The combination with a pocket member, of a stake movable through said pocket having an enlarged portion fitting the pocket when the stake is in raised position whereby clearance is provided for the stake in lowering through the pocket.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE L. HARVEY.

Witnesses:
JAMES P. BARRY,
THOS. O'DONNELL.