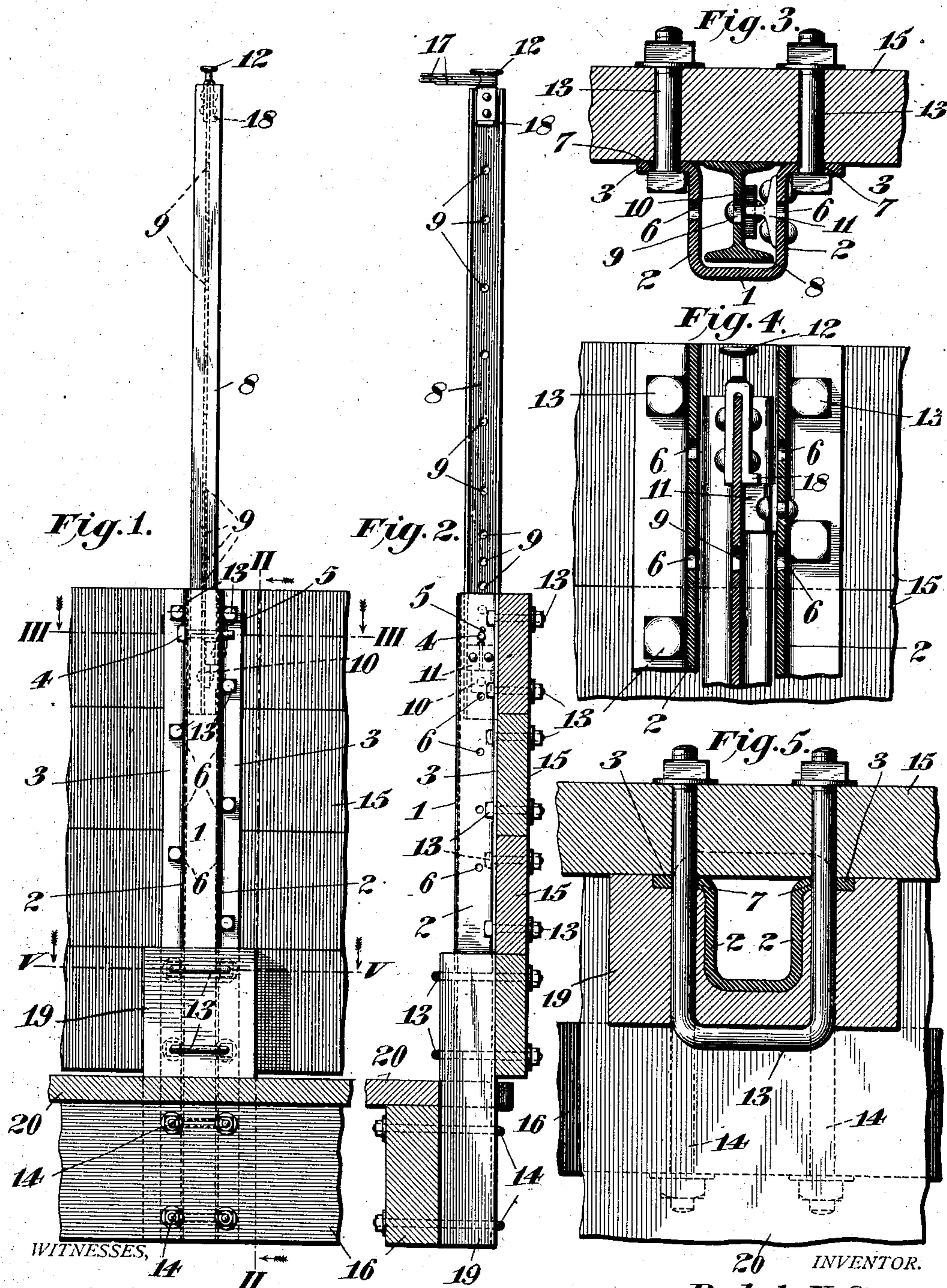


R. V. SAGE.
EXTENSION STAKE FOR CARS.
APPLICATION FILED AUG. 27, 1906.



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EXTENSION-STAKE FOR CARS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RALPH V. SAGE, a citizen of the United States, residing in the borough of Westmont, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Extension-Stakes for Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in general of a car-stake which is adapted both for stiffening and supporting the permanent car sides and for projecting above same to retain light or bulky lading—such as lumber, bark, structural material, or any other kind of goods which extend above the side of the car.

My invention is particularly adapted for use on what is known as "gondola" cars, and for the sake of simplicity in description I will confine my illustration and specification to this form, although my improved stake may be used on other cars.

My invention is more particularly designed to be substituted for the inside wooden stakes now in use on old wooden cars. I have found by actual design that a stake of the kind hereinafter described can be made of less size than a continuous wooden stake to serve the same purpose. This permits me to remove the stakes from old cars and by applying my stake to thereby increase the inside width and capacity of the car.

My invention in general consists of a hollow stake or envelop, which may be made of pressed or rolled metal, fastened to the car-sill or underframing of the car, the car sides in turn being secured to said hollow stake. Inside of this envelop is arranged an extension-stake composed of an I-beam or similar section, which latter can be adjusted to any height desired within its limits, the extension portion of said stake being provided with means to prevent its loss by neglect, accident, or theft.

When not in use, my extension-stake is lowered wholly within the envelop and its top is below or flush with the top of the car side, thus preventing obstruction to the ordinary lading or injury to the car-stake itself, as will be readily understood.

The envelop portion of my stake, as herein illustrated, is substantially trough-shaped in

section with outwardly-extending flanges which bear against the car sides, and by means of the upper portions of said flanges attachment is made with the sides of the car, the cross-section of the envelop or body portion of said stake being substantially square or rectangular with slightly-rounded corners.

The lower part of the envelop or trough-shaped portion of my stake is secured to the car side by U-bolts that pass through holes in the projecting flanges and which hold such parts of the stake in position by means of an interposed block of wood which bears against its exterior surface. The extreme lower part of my stake is attached to the car-sill by other U-bolts that pass through holes in the projecting flanges, which U-bolts bear directly against said flanges in a direction contrary to the U-bolts last mentioned, all as clearly shown on the attached drawings.

My exterior stake or envelop serves to stiffen and maintain the car sides in position and at the same time retains the extensible portion both in its lowered and in its extended positions. Means are also provided for securing the extended portion of the stake at various heights, dependent upon the requirements of the lading, and the top of the extension-stake is furnished with a cleat or rounded button around the shank of which rope or wire may be wound, extending from one stake to its companion stake on the opposite side of the car to assist in holding same and the lading in position.

On account of my stake being smaller in cross-section than the old wooden stakes which have been removed a wooden block is provided to fill the hole in the floor caused by such removal. This block extends down the full depth of the car-sill and extends above the car-floor for a short distance and fits snugly to the envelop portion of my metal stake.

Having thus given a general description of my invention, I will now, in order to make the matter more clear, refer to the annexed sheet of drawings, which forms part of this specification, and in which like figures refer to like parts.

Figure 1 is a longitudinal sectional elevation of a portion of a car, showing a front elevation of my stake with the extension portion raised to its full height. Fig. 2 is a sectional elevation through a car on the line II

II of Fig. 1, showing the car side and the car-sill in section and my stake with the wood blocking in side elevation. Fig. 3 is an enlarged sectional view on the line III III of Fig. 1, showing my envelop or side stake and my extension-stake in cross-section. Fig. 4 is an enlarged vertical sectional elevation taken through the top of the envelop. Fig. 5 is an enlarged sectional view taken on the line V V of Fig. 1, showing the wood blocking used to fill up the opening caused by the removal of the old wooden stake and the U-bolts securing the blocking and my stake to the sides of the car.

Referring now to the various characters of reference on the drawings, 1 is the exterior portion or envelop of my side stake, to which is secured the car side 15 and which is secured to the side sill 16 of the car by means of the bolts 13 and 14, respectively, which pass through the holes 7 in the flanges 3, and through corresponding holes in the car side, car-sill, and blocking 19.

8 is the extension portion of my stake, which is shown as of I-beam section, inserted within the envelop and capable of being moved up and down, so as to be wholly inclosed therein, or to extend to considerable height above the top of said envelop, as desired.

The sides 2 2 of the envelop portion are provided with holes 6 6, and the extension portion of the stake is provided with similar holes 9 9, which may be caused to register with the holes 6 6 in the flat portions 2 2 of the hollow stake 1. The extension-stake 8 may be secured in different positions by inserting the bolt 4 in the holes aforesaid, said bolt being temporarily secured in position by means of the cotter 5.

10 is a lug or flat piece of metal secured to the lower portion of the extension-stake to serve as a stop to prevent the complete withdrawal of same, and to assist in this a T-shaped piece of metal 11 is secured to the interior of the envelop, as shown. Upon drawing the extension-stake up to its full height the projection 10 abuts against the inwardly-extending portion of the T-shaped bar 11, which thus stops the extension-stake from being entirely withdrawn, thereby preventing its loss through carelessness or otherwise.

Owing to this construction the stake is always ready for use and the expense and delay connected with supplying temporary stakes of wood is eliminated.

On top of my extension-stake 8 I secure a button 12, provided with curved shank, as shown, which when the stake is in its extended position serves for the attachment of wire, rope, or other flexible material, extending from one stake to its companion stake on the opposite side of the car to help in retain-

ing the lading. The rounded top of the button 12 also serves as a convenient handle by which to pull the stake upward when required.

Wire is indicated at 17 in Fig. 2 of the drawings.

The spacing of the holes 6 in the envelop and the holes 9 in the extension-stake is so arranged that the extension portion may be adjusted in height beginning at one-inch intervals and continuing thereafter at two-inch intervals until the extension portion is withdrawn as far as the stop will permit. The button 12 of the extension-stake is provided with a flange 18, projecting from its lower portion, which holds the stake in its lowered position by resting on the upper surface of the T-shaped bar 11, as shown in Fig. 4. The car-floor is indicated by the number 20.

It should be especially noted that the trough-shaped envelop with its projecting flanges and the I-beam extension portion are both particularly well adapted to serve the purposes intended in an economical and efficient manner.

I make the exterior portion or envelop of my car-stake of trough-shaped section, open on one side, as this is a particularly strong form and one that is capable of being rolled of iron or steel or pressed from a single plate or sheet of metal.

Although I have shown and described my improvements in considerable detail, I do not wish to be limited to the exact and specific details shown and described, but may use such substitutions, modifications, or equivalents thereof as are embraced within the scope of my invention or as pointed out in the claims.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A car-stake comprising a trough-shaped section provided with integral side flanges through which it is secured to the inside of the car side, said stake projecting downwardly through the car-bottom between the car side and the car-sill, means for securing same to said car-sill, an adjustable metallic stake mounted within the opening of the trough-shaped stake aforesaid and means for securing said adjustable stake in various positions as desired.

2. A car-stake comprising a trough-shaped section provided with integral side flanges having holes therein, bolts passing through said holes and arranged to secure said stake to inside of the car side, said stake extending downwardly between the car-side and the exterior car-sill, U-bolts passing through the lower holes in the flanges aforesaid and through said car-sill for securing the stake thereto, an adjustable metallic stake mounted within the opening of the trough-shaped

stake aforesaid and means for securing said adjustable stake in various positions as desired.

3. A car-stake comprising a trough-shaped
5 section with integral side flanges projecting therefrom, and secured to the inside of the car side through the flanges aforesaid, said stake projecting downwardly through an
10 opening in the car-bottom between the car side and the car-sill, which opening is of greater size than said stake, a block adapted to fill said opening and fit the contour of said trough-shaped stake, means for securing the

lower portion of the aforesaid stake to the car-sill through said block, an adjustable metallic stake mounted within the opening of the trough-shaped stake aforesaid and means for securing said adjustable stake in various positions as desired. 15

In testimony whereof I hereto affix my signature in the presence of two witnesses. 20

RALPH V. SAGE.

Witnesses:

CYRUS E. BROWN,
ELMER SEAVEY.