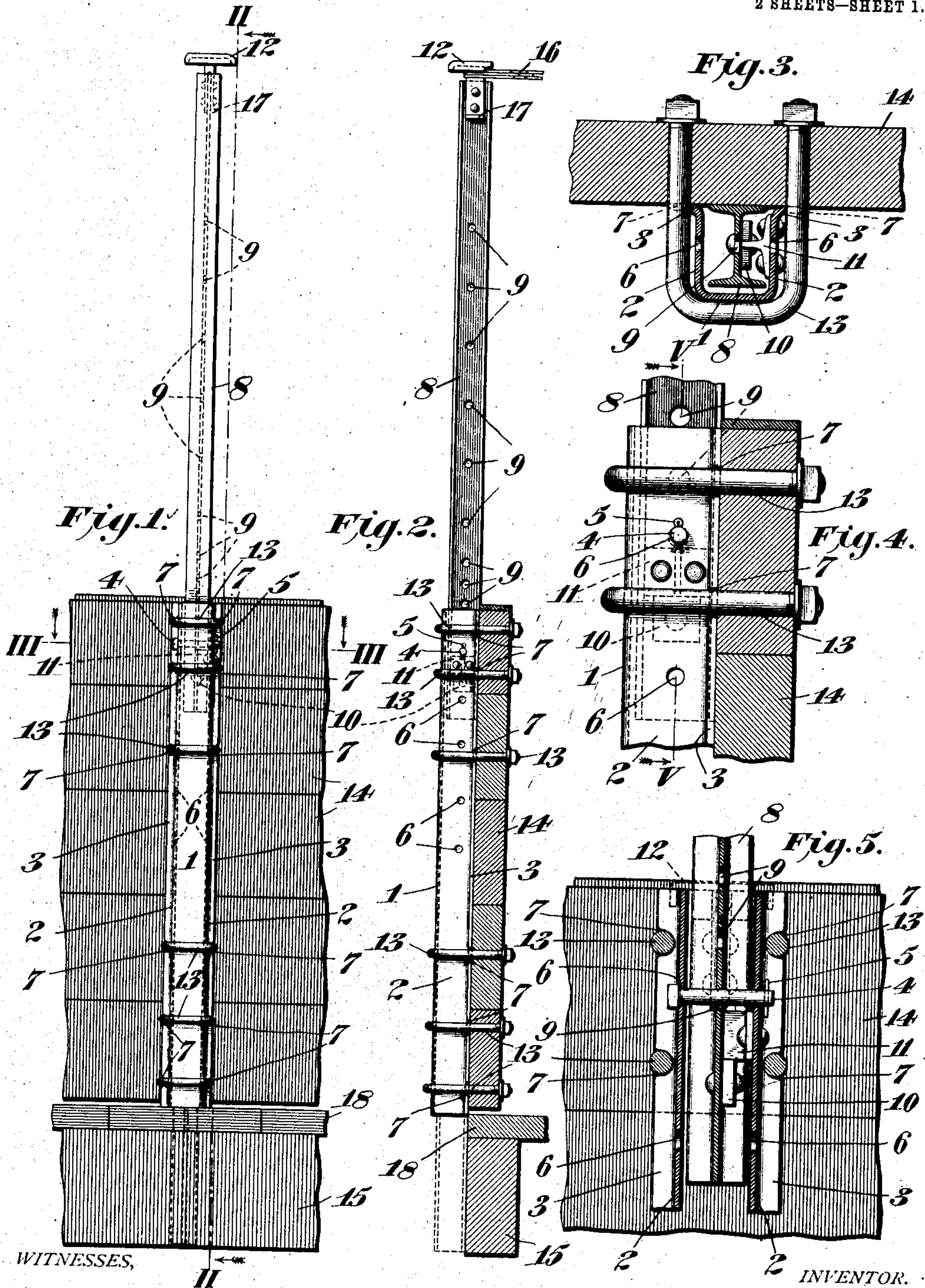


No. 833,978.

PATENTED OCT. 23, 1906.

R. V. SAGE.  
COMBINATION CAR STAKE.  
APPLICATION FILED AUG. 27, 1906.

2 SHEETS—SHEET 1.



WITNESSES,  
Elmer Leavey  
Cyrus C. Brown.

Ralph V. Sage.  
Geo. E. Packray  
his ATTORNEY.

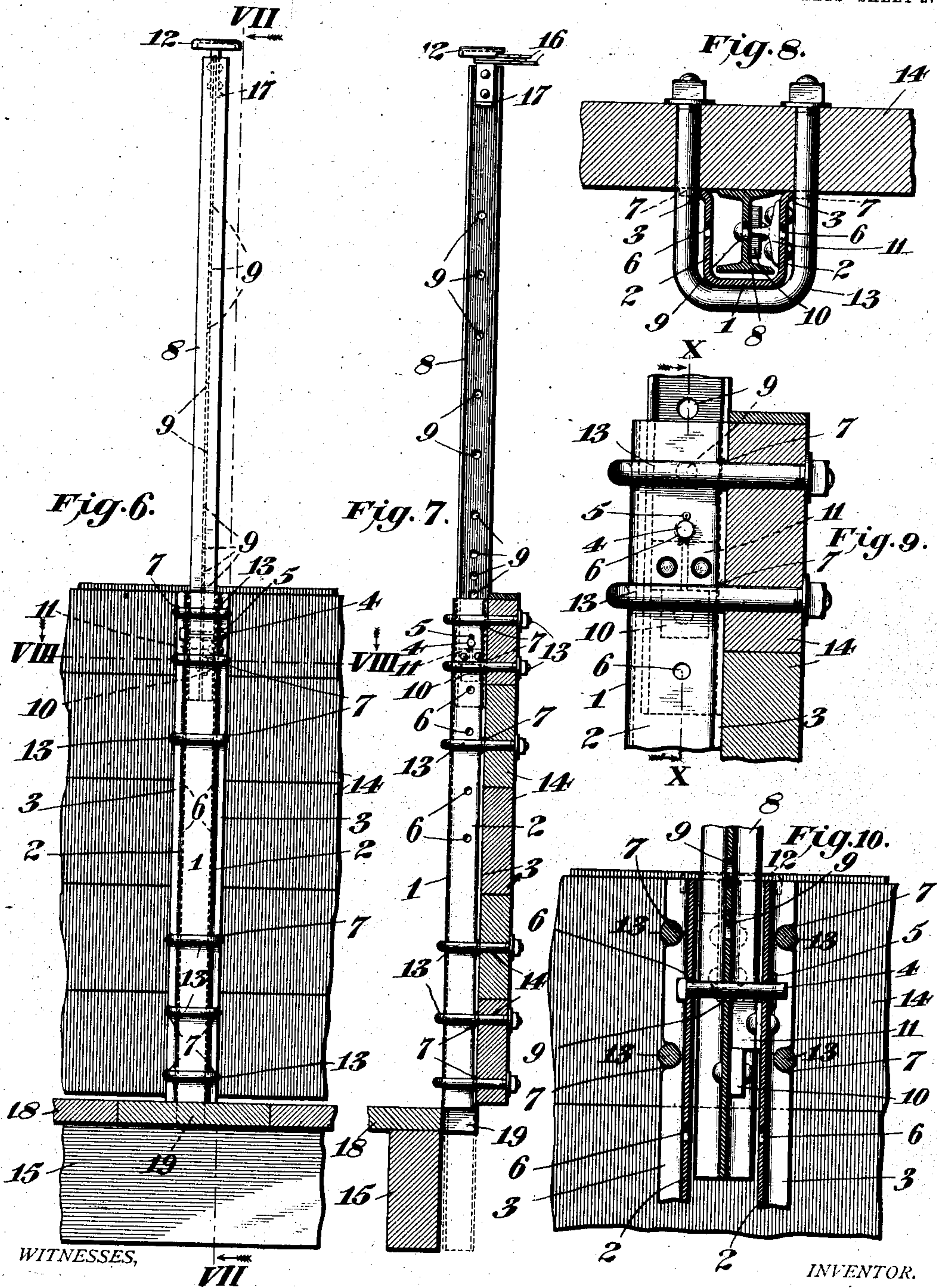


No. 833,978.

PATENTED OCT. 23, 1906.

R. V. SAGE.  
COMBINATION CAR STAKE.  
APPLICATION FILED AUG. 27, 1906.

2 SHEETS—SHEET 2.



WITNESSES,

INVENTOR.

Elmer Seavey  
Cyrus E. Brown

Ralph V. Sage.  
by Geo. E. Thackray  
his ATTORNEY.



# UNITED STATES PATENT OFFICE.

RALPH V. SAGE, OF WESTMONT, PENNSYLVANIA.

## COMBINATION CAR-STAKE.

No. 833,978.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed August 27, 1906. Serial No. 332,113.

*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 Combination Car-Stakes; 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 combination car-stake comprising a fixed portion and an adjustable portion mounted therein, which is particularly adapted to be used on the inside or outside of old cars which are already provided with the ordinary stationary stake.

My improved stake is so arranged that a portion of it can be readily and easily made to project above the sides of the car to retain light or bulky lading, such as lumber, bark, structural material, or any other kind of goods which extend above the sides 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 in general consists of an exterior hollow stake or envelop, which may be made of pressed or rolled metal, fastened to the sides of the car. 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.

The envelop portion of my stake as herein illustrated is substantially trough-shaped in section, with outwardly-extending flanges, which are firmly secured against the sides of the car, the cross-section of said envelop or body portion of my stake being substantially square or rectangular, with slightly-rounded corners. This exterior stake or envelop 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 protecting-cap to keep dirt, snow, ice, water, &c., from collecting in

the hollow envelop and obstructing the operation. Around the shank of this protecting-cap rope or wire or other flexible material 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.

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

Figure 1 is a side elevation of a portion of the outside of a wooden gondola car, showing my improved stake with its extension portion raised to its full height. Fig. 2 is a cross-section through the side of a car, showing my stake in side elevation, the extension portion in this figure being also raised to its full height, this section being taken on the line II II of Fig. 1. Fig. 3 is an enlarged horizontal section on the line III III of Fig. 1. Fig. 4 is an enlarged sectional elevation of a part of my stake, taken in the line II II of Fig. 1. Fig. 5 is an enlarged sectional elevation on the line V V of Fig. 4, showing the top of my exterior stake or envelop and the position of the lower part of the extension portion when it is raised to its full height. Fig. 6 is a sectional side elevation of a portion of the inside of a wooden gondola car, showing my improved stake with its extension portion raised to its full height. Fig. 7 is a cross-section through the side of a car, showing my improved stake in side elevation, the extension portion in this figure being also raised to its full height, the section being taken on the line VII VII of Fig. 6. Fig. 8 is an enlarged horizontal section on the line VIII VIII of Fig. 6. Fig. 9 is an enlarged sectional elevation of a part of my stake on part of the line VII VII of Fig. 6. Fig. 10 is an enlarged sectional elevation on the line X X of Fig. 9, showing the top of my exterior stake or envelop and the position of the lower part of the extension portion when it is raised to its full height.

Referring now to the various characters of reference on the drawings, 1 is the exterior portion or envelop of my side stake, which is secured to the sides of the car 14 by means of the U-shaped bolts 13, which pass through the notches 7 in the flanges 3 3 and through corresponding holes in the sides of the car.

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 down or up so that the cap 12 is level with the top of the car side or to extend to considerable height above the top thereof, as desired.

The side flanges 3 of the envelop portion are of sufficient width to give a good bearing against the car side and are provided with notches 7 7, and the extension portion of the stake is provided with 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 the top of my extension-stake 8 I secure a protecting-cap provided with a 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 retaining the lading. The protecting-cap 12 also serves as a convenient means by which to pull the stake upward when required.

Wire is indicated at 16 in Figs. 2 and 7 of the drawings.

The protecting-cap 12 is so designed and arranged that when the extension portion of the stake is in its lowered position said cap rests upon and forms a sort of roof with edges which project downwardly over the top of the envelop, thus serving to prevent cinders, dust, water, snow, ice, &c., from lodging within the envelop, which would cause damage or obstruction to the operation of the stake. This cap 12 also serves as a convenient handhold for withdrawing the stake from its lowered position when desired and is an important and particular feature of my invention.

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 protecting-cap 12 of the extension-stake is provided with a flange 17, 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 Figs. 5 and 10.

It should be noted that my improved stake is readily adapted to be attached to the insides or outsides of existing cars, as the stationary portion of same does not extend below the car-floor, although the extension portion of same may project below and abut against the adjoining sill, all as indicated on the drawings.

Although I have described my stake as applied to the sides of a car, it may also be used on the ends, if desired.

In the various drawings, 15 represents a car-sill, 18 the car-floor, and in Fig. 7, 19 indicates a notch or opening in the car-floor to permit the lower end of the extension portion 8 to pass therethrough to assume its lowered position.

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.

My improved stake also has the advantage that it is always ready for use when required, thus obviating the expense and delay of supplying and fitting temporary stakes for high lading.

Although I have shown, illustrated, and described my invention in connection with the inside and outside of a wooden gondola car, I wish it understood that it is equally applicable to metal cars, the only change required being in the length and arrangement of the fastening bolts or rivets, as may be readily understood.

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.

I prefer to make my hollow stake of substantially rectangular cross-section, having rounded corners, as shown, and with outwardly-projecting flanges 3 3, which flanges are comparatively narrow for the sake of economy, but of sufficient width to provide a good bearing against the car side, against which they are firmly held by the U-bolts, as shown.

In order that the U-bolts may fit snugly around the body portion of the hollow stake, notches 7 7 are cut in the flanges, and these notches also serve to retain the stake vertically in position, or, in other words, to prevent it from moving up or down.

The cap 12 is shown by dotted lines in its



lowered position in Fig. 5, from which it may be seen that this cap projects outwardly over the trough-shaped section, and also has downward projections which serve as a further protection and insure that no extraneous material can lodge within the hollow stake when the cap is down.

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 with narrow integral side flanges projecting therefrom, notches in the edges of said flanges, U-bolts passing around said stake and through the notches aforesaid for the purpose of securing said stake to the car side, an adjustable metallic stake mounted within the opening of the trough-shaped stake and means for securing said adjustable stake in various positions therein as desired.

2. A car-stake comprising a trough-shaped section extending from the top of the car side approximately to the level of the car-floor, integral side flanges projecting from said trough-shaped section, notches in the edges of said flanges, U-bolts passing around the body portion of said stake and through the notches aforesaid for the purpose of securing said stake to the car side, an adjustable metallic stake mounted within the opening of the trough-shaped stake and means for securing said adjustable stake in various positions therein as desired.

3. A car-stake comprising a trough-shaped section extending approximately from the top of the car side to the level of the car-floor, narrow integral side flanges projecting from said trough-shaped section, notches in the edges of said flanges, U-bolts passing around the body portion of said stake and through the notches aforesaid for the purpose of securing said stake to the car side, an adjustable metallic stake of I-beam section located within the opening of the trough-shaped

stake aforesaid, and means for securing said adjustable I-beam stake in various positions therein as desired.

4. A car-stake comprising a trough-shaped section extending approximately from the top of the car side to the level of the car-floor, narrow integral side flanges projecting from said trough-shaped section, notches in the edges of said flanges, U-bolts passing around the body portion of said stake and through the notches aforesaid for the purpose of securing said stake to the car side, an adjustable metallic stake of I-beam section located within the opening of trough-shaped stake aforesaid, holes in the opposite sides of the said trough-shaped stake, corresponding holes in the body portion of the adjustable metallic stake adapted to register with the holes in the side of the trough-shaped stake, and a bolt adapted to pass through said registering holes, whereby the adjustable stake may be held in various positions as desired.

5. A car-stake comprising a trough-shaped section with narrow integral side flanges projecting therefrom, means for securing said trough-shaped section to the car side, an adjustable metallic stake located within the opening of the trough-shaped stake aforesaid, a cap mounted on the upper end of said adjustable stake, said cap being provided with projections and flanges to overlap, cover and protect the opening in the top of the trough-shaped section when the adjustable stake is in its lowered position.

6. A car-stake comprising a fixed portion of trough-shaped section secured to the car side, an adjustable portion mounted therein and provided with a cap at its upper end, said cap having a shank around which flexible material such as wire, &c., may be secured, said cap being provided with projections on its edges adapted to overlap and protect the upper portion of said trough-shaped section when the adjustable stake is in its lowered position.

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

RALPH V. SAGE.

Witnesses:

CYRUS E. BROWN,  
ELMER SEAVEY.