

No. 886,896.

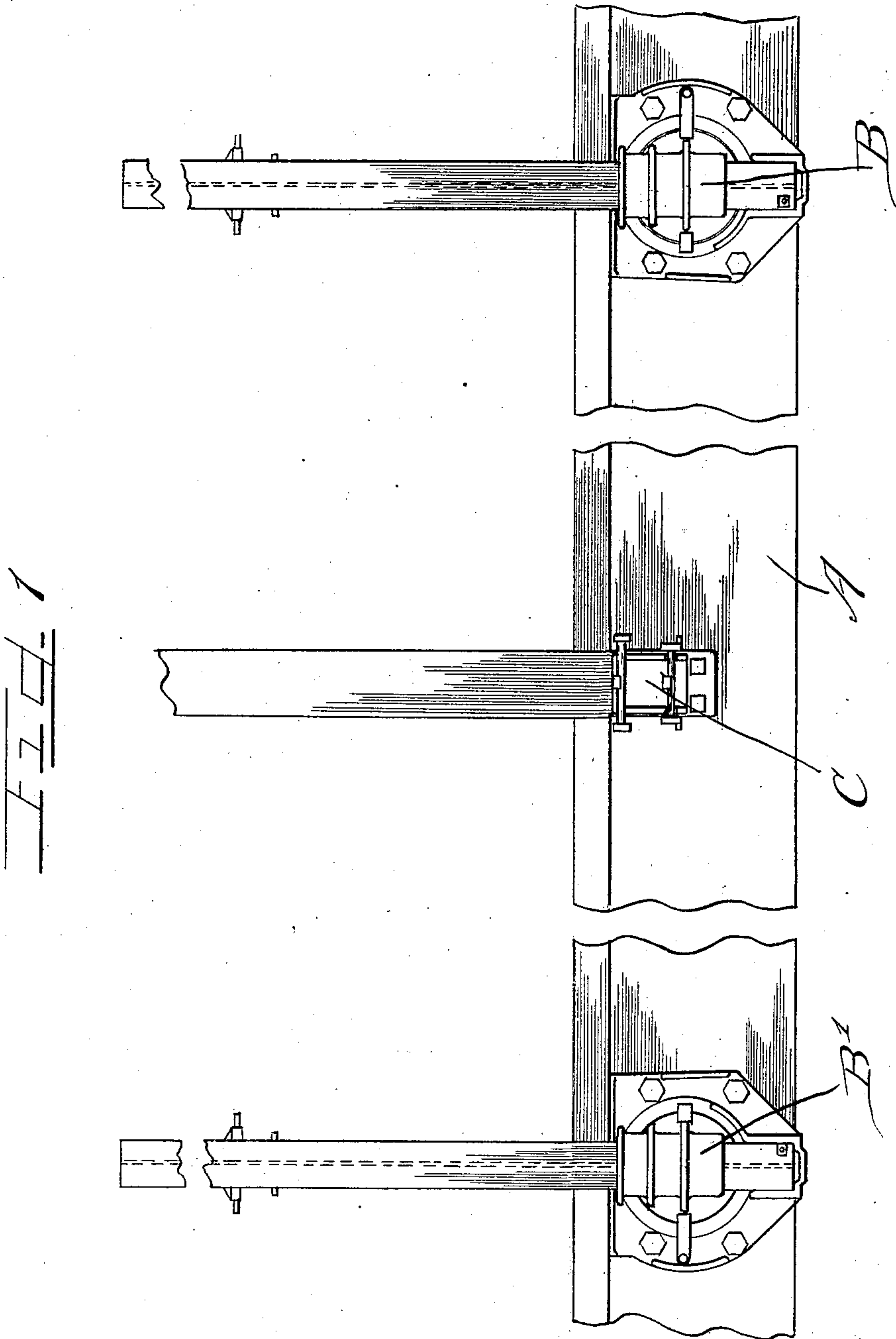
PATENTED MAY 5, 1908.

J. A. TOOMEY.

ATTACHING MEANS FOR STAKES.

APPLICATION FILED JULY 22, 1907.

2 SHEETS—SHEET 1.



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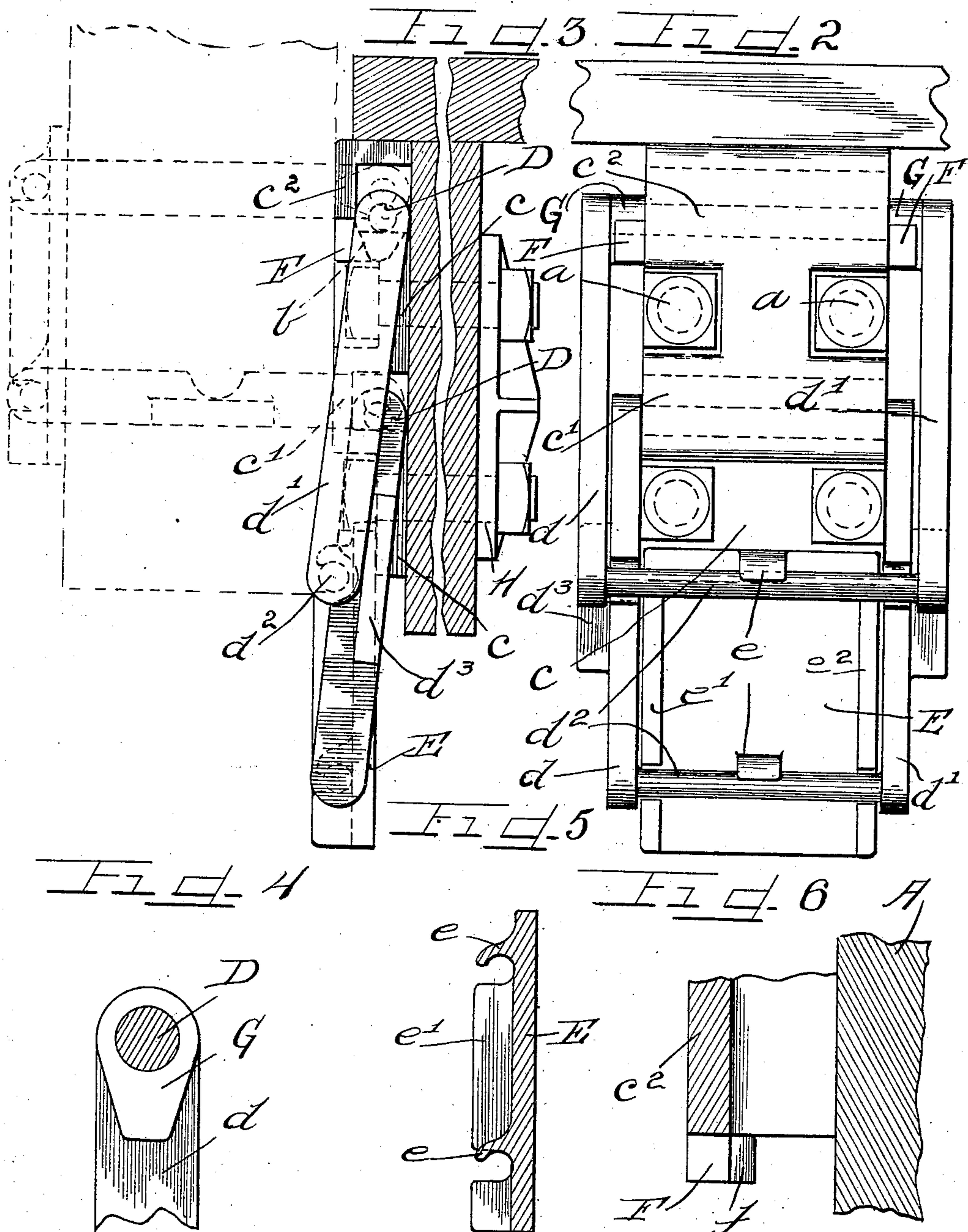
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2 SHEETS—SHEET 2.



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ATTACHING MEANS FOR STAKES.

No. 886,896.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed July 22, 1907. Serial No. 385,022.

To all whom it may concern:

Be it known that I, JOHN A. TOOMEY, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Attaching Means for Stakes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in attaching means for stakes.

Heretofore various mechanisms have been employed for permanently attaching stakes to cars or other objects which usually require a specially constructed stake. When such devices are used they are secured to the car sills at suitable distances apart and are adjustable to a vertical position when the car is loaded to firmly hold the load on the car and are also adjustable to a horizontal position when not in use. Such devices act satisfactorily to prevent displacement of the load when the material secured thereon is of sufficient length or size but with short length of material such as short lumber it is desirable to have a temporary stake intermediate the permanent stakes to more rigidly secure the load from shifting or displacement.

It is an object of this invention to provide an intermediate stake holder adapted for permanent attachment to the car and in which any wooden or other convenient stake may be quickly inserted or removed.

It is a very important object of this invention to provide a stake holder adapted by gravity of certain parts thereof together with the gravity of the stake to firmly bind, clamp or secure the stake in upright position.

It is also an object of this invention to provide a stake holder which when not holding a stake drops by gravity or may be adjusted beneath the ledge of the car against the sill and means for automatically locking the same from movement in said position thus preventing all possible danger of breakage, eliminating unnecessary wear and permitting free operation.

It is finally an object of this invention to provide a very simple, efficient and strong attaching device of few parts and quickly attachable or as quickly detached.

The invention consists of the matters hereinafter described and more fully pointed out and defined in the appended claims.

On the drawings: Figure 1 is a fragmentary side elevation of a car sill provided with permanent stakes and attaching mechanism between which a device embodying my invention is secured. Fig. 2 is a front elevation of a device embodying my invention. Fig. 3 is a side elevation of a device embodying my invention with the sill in section. Fig. 4 is an enlarged fragmentary detail of one of the cams or teeth. Fig. 5 is an enlarged vertical section taken through the binding or clamping plate. Fig. 6 is a fragmentary detail of the sill plate showing one of the cams.

As shown in the drawings: A indicates the side sill of a car to which is rigidly secured permanent stakes and attaching mechanism B—B' embodying my invention for which application for patent was filed May 20th, 1907, Serial No. 374,683, and between which and rigidly secured to the sill, is an intermediate stake holder C. Said stake holder C comprises a sill plate *c* of any suitable material constructed by casting or in any other manner which is provided with suitable apertures through which and apertures in the sill the bolts *a* securing the plate in position extend. Said plate at the top and approximately centrally thereof is provided with slots, channels or housings *c'*—*c''* opening rearwardly through the plate as shown clearly in Fig. 3.

Loops or binders are pivotally and adjustably secured in each slot or channel and each comprises a bolt D secured in said slots or housings which extend outwardly beyond the sides of the plates. Integrally or otherwise rigidly secured to the ends of said bolts are arms or bars *d*—*d'* which are rigidly connected at their outer ends by a bolt *d''*. As shown the arms or bars *d*—*d'* forming the lower loop are notched to receive the bolt *d''* of the upper loop therein when the holder is not in use and lugs *d'''* integral with said bars *d*—*d'* are provided at the notched parts of the bars to strengthen the same.

A binding or clamping plate E constructed of malleable iron or other suitable material is pivotally secured to the bolts *d''* of the loop by means of lips or lugs *e*. Said plate is provided with flanges *e'*—*e''* at the sides thereof

which are notched to receive the bolt d^2 therein.

Integral with the sill plate a on each side of the same adjacent the top thereof are
 5 cams or teeth F having cam faces f and rigidly secured to each end of the bolt D of the upper loop is a tooth or cam G having a face complementary with the face of said cam F and adapted to fit between the same and the
 10 sill. A plate, fitting or casting H is secured on the rear side of the sill through which the bolts a extend affording great strength.

The operation is as follows: The bolts D of the loops are inserted in the respective slot
 15 or housing and the sill plate c is bolted to the sill. The clamping plate E is engaged to the bolts d^2 by bending the lips e thereover which firmly but pivotally secure the same in position. Any kind of stake which is handy is
 20 inserted by lifting the loops vertically upwardly until the cam or tooth G clears the top of the cam F at which position the loops are turned horizontally and the stake inserted in the pocket formed between the sill
 25 plate and clamping plate. If the lower end of the stake is smaller than the pocket thus formed it will nevertheless be firmly secured in position as the clamping plate drops and binds the stake between the same and sill
 30 plate and in such position the cam G rests on the top of the cam F . It is thus seen that the size of the pocket is automatically adjustable to suit various sizes of stakes. When the stake is removed the loops and clamping
 35 plate drop by gravity against the sill in which position the cam G engages between the cam F and said sill locking the loops and clamping plate E from swinging thus preventing all danger of breakage and unnecessary wear of parts. The bolts D or d^2 may
 40 of course be threaded on the ends to engage the arms and this is preferable if the clamping plate is cast for then the lips e would be made as shown in Fig. 5 and the bolts could
 45 be inserted therethrough, while on the other hand by making the clamping plate of malleable material the loops can be cast or otherwise made in one piece and the lips turned over the bolts.

50 The clamping plate may of course if preferred be dispensed with and the loops alone used which act to efficiently secure a stake in upright position but by using the clamping plates a broad bearing is provided on the
 55 outer side of the stake affording a somewhat more rigid construction.

The construction shown while simple is very strong, efficient and durable and by providing a casting or fitting at the rear of
 60 the sill the rigidity of the construction is increased.

Details of construction may be varied and numerous changes may be made without departing from the principles of this invention
 65 and I therefore do not purpose limiting this

application otherwise than necessitated by the prior art.

I claim as my invention:

1. A stake holder comprising a sill plate and a clamping plate pivoted thereto between which the stake is engaged said clamping plate adapted for adjustment to lie against the sill plate. 70
2. A stake pocket embracing parts adapted to automatically adjust the size of the pocket and means for locking the parts from movement when the pocket is empty. 75
3. A device of the class described embracing coacting parts, one of which is adjustable from the other to form a pocket and also adapted to fold thereagainst when not in use. 80
4. A stake pocket comprising rigid and movable parts, said movable parts vertically adjustable to vary the size of the pocket.
5. A stake holder comprising a sill plate, a clamping plate pivoted thereto and between which the stake is engaged, and means locking the clamping plate from movement when not in operative position. 85
6. Attaching mechanism for stakes embracing a plate and loops pivoted thereto adapted to receive a stake therethrough. 90
7. Attaching mechanism for stakes comprising a plate for rigid engagement to the sill, loops secured thereto one at the top and the other near the middle, both adapted to receive the end of a stake therein and means for automatically locking the loops from movement. 95
8. In a device of the class described the combination with a sill plate of means pivoted thereto adapted to lie thereagainst in normal position and adapted to be swung to horizontal position to engage a stake therein. 100
9. In a device of the class described a clamping plate, arms pivoted thereto, a plate adapted for rigid engagement to an object and to which said arms are pivoted, said plates adapted to secure a stake therebetween in upright position by the weight of the stake. 105
10. In a device of the class described the combination with a sill plate and means adapted to secure a stake in upright position by binding the same thereagainst, said means adapted to hang below the sill plate when not in use. 110
11. In a device of the class described the combination with a stake and mechanism adapted to receive the end of the stake therein and secure the stake in upright position by gravity thereof. 115
12. A stake holder embracing pivotally connected plates between which the stake is rigidly secured by gravity of one of said plates. 120
13. A stake attaching device comprising plates pivotally connected one of which is adapted for rigid engagement to an object 125 130

and between which the stake is rigidly secured by gravity and cams locking the movable plate from movement when in normal position.

14. In a device of the class described the combination with a slotted base plate adapted for rigid engagement to a sill of bolts secured in said slots, arms or bars rigidly connecting the outer ends of the corresponding bolts, a plate secured thereto adapted when not in use to swing to contact the base plate and means locking the same in said position.

15. In a device of the class described the combination with a base plate of loops secured thereto adapted to receive the end of a stake therein, said loops adapted to be turned to a horizontal position or swing to a vertical position.

16. In a device of the class described the combination with base plate of loops secured thereto adapted to receive the end of a stake therein, said loops adapted to be turned to a horizontal position or swung to a vertical position by gravity and mechanism necessitating lifting the loops vertically before swinging to a horizontal plane.

17. A device of the class described embracing a base plate having slots or channels therein, movable bolts in said channels, parallel bolts rigidly secured thereto, a clamping plate, lips or lugs integral therewith adapted to engage over the last named bolts to pivotally secure the plate thereto, cams or teeth rigidly secured to one of the first named bolts and cams integral with the base plate coacting therewith to lock the clamping plate in one adjustment.

18. In a device of the class described the combination with a base plate of a clamping plate secured thereto adapted to be adjusted on a plane parallel with the base plate and to provide a sufficient space therebetween to receive a stake, said clamping plate foldable against the base plate when not in use.

19. In a device of the class described the combination with a base plate of a clamping plate secured thereto adapted to be adjusted on a plane parallel with the base plate and to provide a sufficient space therebetween to receive a stake, said clamping plate foldable against the base plate when not in use and coacting parts one rigidly secured to the base plate and the other movable with the clamping plate for automatically locking the clamping plate from movement when not in use.

20. In a device of the class described coacting plates adapted to rigidly clamp a stake therebetween one of which is movable, interfitting parts one on each plate for locking the movable plate from movement and a fitting rigidly connected with one of said plates.

21. Stake attaching mechanism embracing a plate and loops pivoted thereto adapted for

simultaneous adjustment to receive the end of a stake.

22. A stake attaching mechanism comprising means for rigid engagement to an object to which the stake is to be attached and means pivoted thereto adapted to swing to a vertical position parallel therewith affording a space therebetween for the stake.

23. A stake attaching mechanism embracing a plate adapted for rigid engagement to an object and means normally lying close to said plate adapted for adjustment to form a pocket to receive a stake, said means necessitating vertical movement before forming the pocket.

24. A stake attaching device embracing a plate adapted for pivotal engagement with a car sill adapted to approximately lie thereagainst in inoperative position and adapted to be swung outwardly to provide a space between the same and sill for the stake.

25. A stake attaching mechanism embracing a plate pivotally engaged to a car sill or other suitable object and adjustable from the sill to afford a pocket and adapted to automatically vary the size of the pocket to suit the size of the stake, said plate adjustable to lie close to the sill thereby occupying small space when not in use.

26. A stake attaching mechanism embracing a plate pivotally engaged to a car sill or other suitable object and adjustable from the sill to afford a pocket and adapted to automatically vary the size of the pocket to suit the size of the stake, said plate adjustable to lie close to the sill thereby occupying small space when not in use and means for locking the plate from movement in the last named position.

27. A stake attaching mechanism embracing coacting parts one of which is adapted for rigid engagement to an object and the other pivotally supported thereby, said pivotal part adjustable to firmly engage stakes of varying sizes and coacting means on said parts adapted to lock the pivotal part from movement.

28. In a device of the class described the combination with a plate adapted for rigid attachment to a car sill or other object, a plate on the opposite side of the sill, and connected therewith by the attaching means and means pivotally engaged to the sill coacting with the first named plate to provide a pocket for receiving a stake, said pivotal means adjustable to contact the first named plate to occupy small compass.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JOHN A. TOOMEY.

Witnesses:

K. E. HANNAH,
J. W. ANGELL.