J. G. SCHROEDEL.

RELEASABLE CAR STAKE.

APPLICATION FILED JUNE 27, 1910.

989,930.

Patented Apr. 18, 1911.

2 SHEETS—SHEET 1.

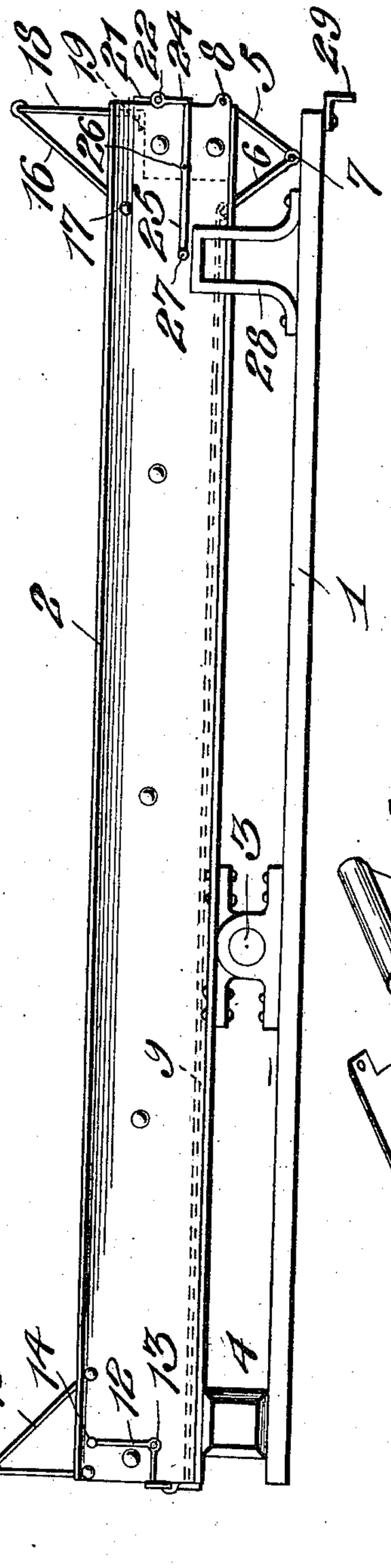

FIG. 1.

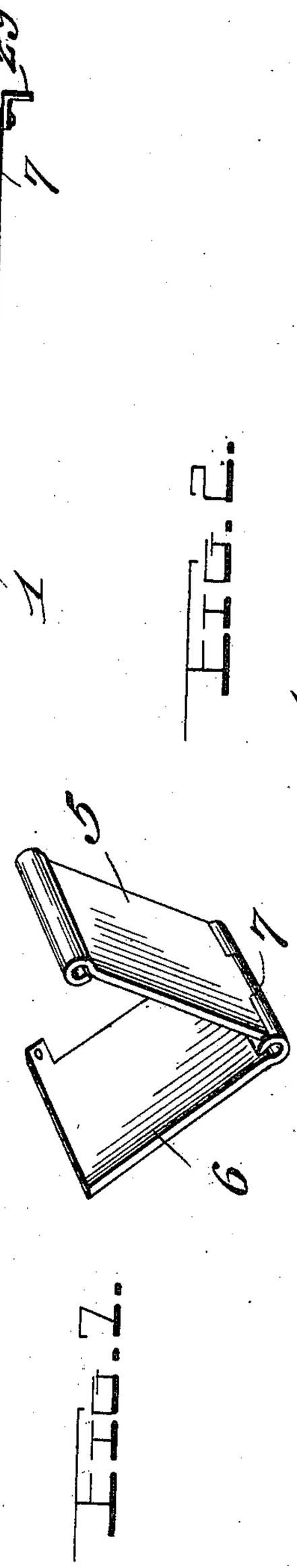

FIG. 2.

FIG. 3.

Witnesses

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2 SHEETS—SHEET 2.

FIG. 4.

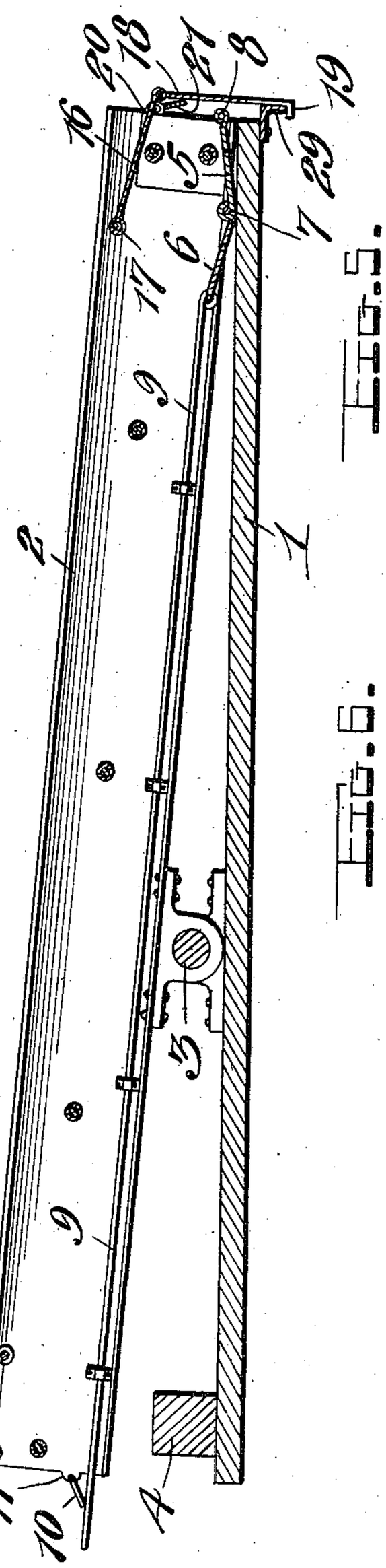


FIG. 5.

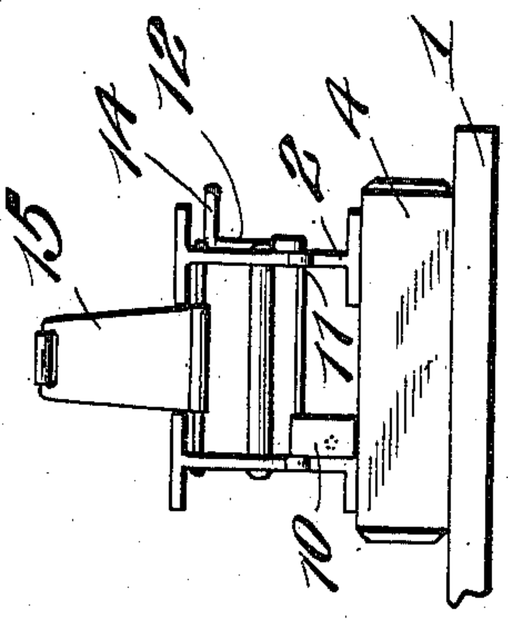


FIG. 6.

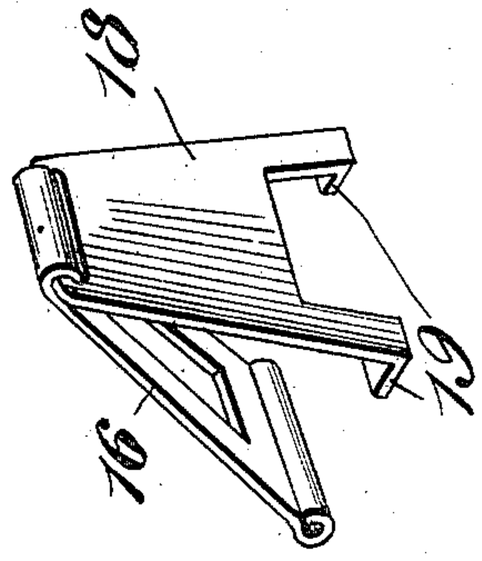
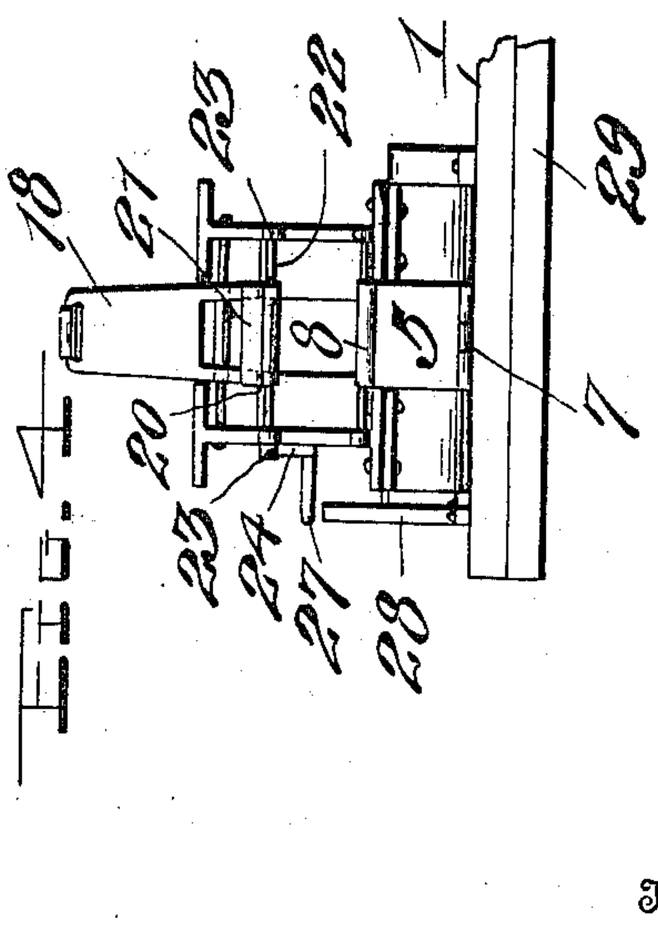


FIG. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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RELEASABLE CAR-STAKE.

989,930. Specification of Letters Patent. Patented Apr. 18, 1911.

Application filed June 27, 1910. Serial No. 569,225.

To all whom it may concern:

Be it known that I, JOHN G. SCHROEDEL, a citizen of the United States, residing at McKenna, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Releasable Car-Stakes, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in lumber and freight cars or vehicles and more particularly to releasable stakes therefor and means for tilting the load supporting bunkers or beams whereby the load of logs or other freight may be readily discharged.

One object of the invention is to provide an improved releasable car stake which will be simple, practical and highly efficient.

Another object of the invention is to provide a releasable car stake in connection with means for tilting the load supporting bunkers or beams.

With these and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is an end view of a portion of a car illustrating the application of my invention thereto, the parts being in normal position; Fig. 2 is a top plan view; Fig. 3 is a vertical longitudinal section taken on the plane indicated by the line 3—3 in Fig. 2 but showing the parts in their released or tilted positions; Fig. 4 is an end view of the parts shown in Fig. 2; and Figs. 5, 6 and 7 are detail views.

Referring more particularly to the drawings 1 denotes a portion of a freight car or other vehicle and 2 denotes a load supporting member in the form of a bunker or beam preferably composed of spaced eye beams suitably bolted or otherwise secured together. This supporting member or bunker 2 extends transversely of the car and is mounted on a longitudinally extending pivot 3 located at a point a little to one side of the center of the member 2 whereby one end of the latter will be overbalanced and will tilt downwardly when not supported in a plane parallel with the top of the car frame or platform, thereby allowing the logs or other load to roll off of the car.

To prevent the short end of the member or bunker 2 from tilting downwardly, a stop 4 may be arranged on the car beneath it, and to support the longer end of said member when the logs or other load are on the car, I provide a pair of supporting links 5, 6 which are pivotally united at 7 and one of which is pivoted at 8 to the long end of the member 2 while the other is pivotally connected to an operating rod 9 which extends longitudinally along the member to the short end of the same. The rod 9 may be suitably guided and its free end is adapted to be engaged by a latch 10 pivotally mounted at 11 and in turn engaged by a locking member 12. The latter is of right angular shape, being pivotally mounted at 13 and provided at one end with a crank handle 14. When the parts are in their normal positions shown in Fig. 1 and it is desired to tilt the supporting member or beam 2, the locking member 12 is actuated to release the latch lever 10, which latter in turn releases the rod 9, whereupon the weight of the load and the overbalanced long end of the member 2 will cause said end to tilt downwardly.

To retain the logs or other load on the supporting member 2, I prefer to provide a stationary stake 15 at the short end of said member and a releasable stake 16 at the long end of the same. This releasable stake 16 is pivotally mounted at its inner end, as shown at 17 between the spaced eye beams forming said member 2 and to its outer end is pivoted a supporting link 18 having a hook-shaped free end 19. When the stake 16 is in its operative position it inclines upwardly and outwardly while the supporting link 18 is disposed vertically and has its end 19 arranged in a notch or seat 20, said link 18 being retained in position by a stop arm 21 fixed centrally to a transverse pivot rod 22 mounted in bearings 23 on the ends of the two eye beams. On the outer end of

the pivot rod or shaft 22 is a depending arm 24 adapted to be engaged by one end of a latch lever 25 fulcrumed intermediate its ends at 26 on the outer side of one of the eye beams. The inner end of the lever 25 has a right angularly projecting arm 27 arranged in the path of a stationary trip or stop 28 secured on the frame or platform of the car 1 and so positioned that when the long end of the member 2 tilts downwardly the arm 27 will be operated to cause the latch 25 to release the arm 24 and consequently cause the arm 21 to release the supporting link or brace 18, whereupon the stake 16 will drop below the plane of the upper faces of the eye beams and permit the logs to roll freely off of the car. When the member 2 tilts the hook-shaped lower end 19 of the link 18 is adapted to engage a keeper 29 in the form of an angle iron carried by the car, thereby causing the member 2 to be locked in its tilted position.

In operation, it will be seen that when the parts are in normal position, the link 18 will support the releasable stake 16 and the two links 5, 6 being disposed in upwardly diverging relation will support the member 2 against tilting movement. When it is desired to release the load, it is only necessary to swing the crank arm 14 to cause the arm 10 to release the rod 9, whereupon the weight of the load and the long end of the member 2 will tilt the latter and the arm 27 of the latch lever 25 coming in contact with the stationary trip 28 will cause said lever to release the arm 24 so that the weight of the logs or load bearing against the stake 16 will cause the latter to drop and permit the link 18 to engage the keeper 29.

From the foregoing it will be seen that the invention provides a simple and practical device of this character which will enable a load of logs to be readily dumped without danger to the operator since he stands on one side of the car while the logs are dropped from the other side of the same. Furthermore, the parts are so constructed that they will be securely held in normal position and may be easily released to dump the load.

While I have shown and described in detail the preferred embodiment of my invention, it will be understood that I do not wish to be limited to the precise construction set forth since various changes in the form, proportion, and arrangement of parts may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:

1. In a vehicle, the combination of a tilting load support, means for sustaining the same, a releasable stake on said load support, and means for holding said stake in operative position, the last mentioned means being automatically released on the tilting of the load support.

2. In a vehicle, the combination of a shiftable load supporting means, a holding means for said load supporting means, a releasable stake and means controlled by the movement of said shiftable load supporting means for holding the stake in operative position.

3. In a vehicle, the combination of an overbalanced pivotally mounted load support, a supporting means for the overbalanced portion of said load support, means for holding and releasing said supporting means, a releasable stake on said load support, a holding means for said stake, and a stationary trip arranged in the path of and adapted to actuate the stake holding means whereby the stake will be released when the load support tilts.

4. In a vehicle, the combination of a support, a load supporting member pivoted adjacent its center on said support whereby one of its ends is overbalanced, supporting links between said support and the overbalanced end of said member, means for holding and releasing said links and a releasable car stake on the overbalanced end of said member and controlled by the tilting of the latter.

5. In a vehicle, the combination of a support, a load supporting member pivoted adjacent its center on said support whereby one of its ends is overbalanced, supporting links between said support and the overbalanced end of said member, an operating rod extending from said supporting links, a holding member for said rod, a locking member for the last mentioned holding member and a releasable stake controlled by the tilting of said member.

6. In a vehicle, the combination of a tilting load supporting member, means for supporting and releasing the same, a releasable stake pivotally connected to said member, a supporting link for said stake, and a holding member for said link controlled by the tilting movement of said load supporting member.

7. In a vehicle, the combination of a tilting load supporting member, means for supporting and releasing the same, a releasable stake pivotally connected to said member, a supporting link for said stake, a holding member for said link, a latch lever co-acting with said holding member and a stationary trip arranged in the path of said latch lever and adapted to cause the same to release the holding member when the load supporting member tilts.

8. In a vehicle, the combination of a support, a keeper thereon, a tilting load supporting member on said support, means for

supporting and releasing said member, a pivotally mounted stake on said member, a supporting link pivotally connected to said stake and having means to engage said keeper, and a holding means for said link controlled by the tilting of said load supporting member.

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

JOHN G. SCHROEDEL.

Witnesses:
WM. P. HOPPING,
GEORGE SEYFRIED.