

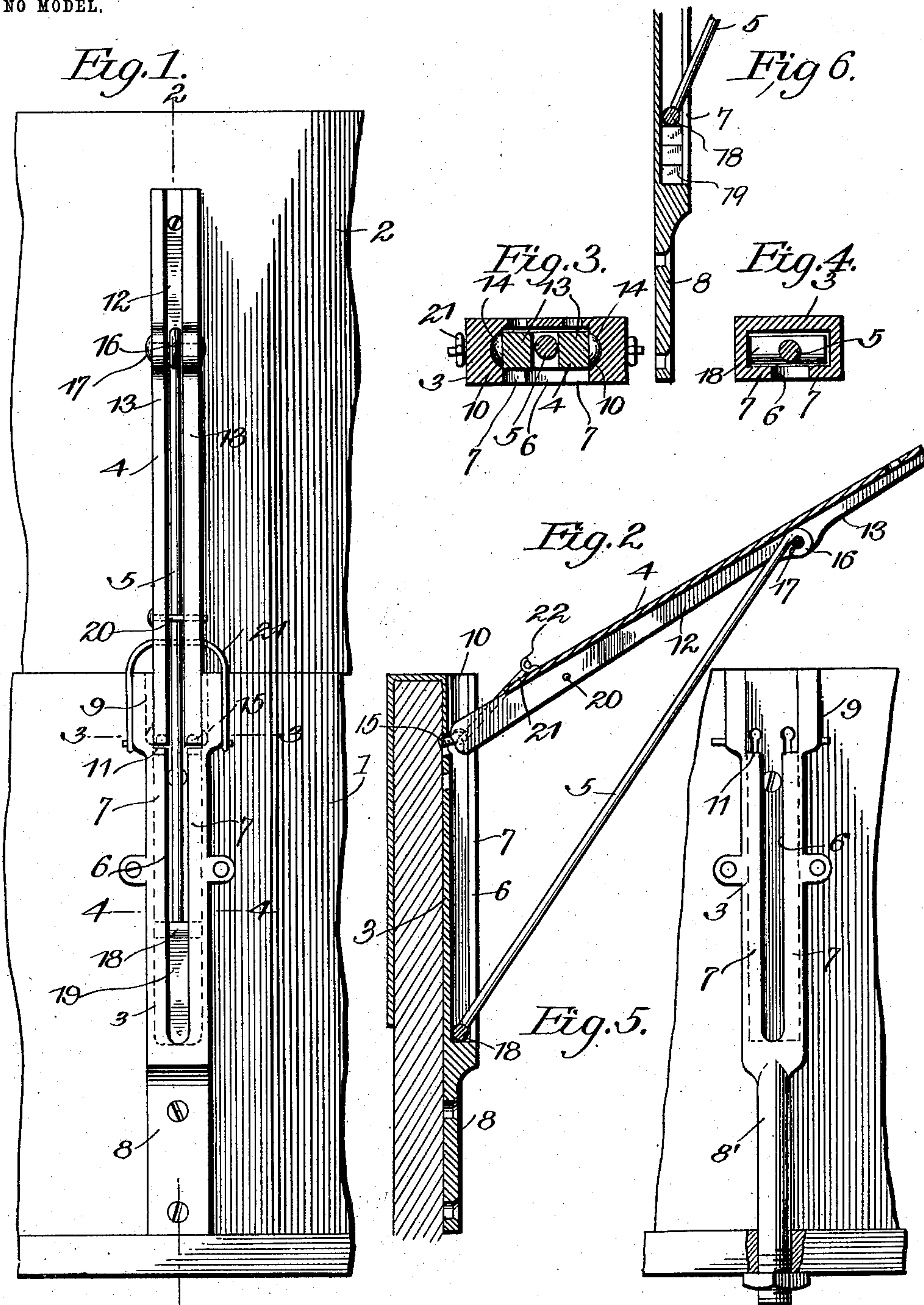
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H. S. CUNNINGHAM.
HINGE OR HAY RACK ATTACHMENT.

APPLICATION FILED JUNE 18, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

HARVEY S. CUNNINGHAM, OF SHELBYVILLE, TENNESSEE.

HINGE OR HAY-RACK ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 743,461, dated November 10, 1903.

Application filed June 18, 1903. Serial No. 162,128. (No model.)

To all whom it may concern:

Be it known that I, HARVEY S. CUNNINGHAM, a citizen of the United States, residing at Shelbyville, in the county of Bedford and State of Tennessee, have invented a new and useful Improvement in Hinges for Hay-Rack Attachments, of which the following is a specification.

My invention relates to hinges, and is especially designed for use in connection with hay-racks for pivoting the upper side-board of the rack-body to permit of it being swung to an angular position relative to the lower side-board and of its ready removal, as circumstances may require, and has for its objects to produce a device of this character of comparatively simple construction, which will be efficient in operation, one in which the upper leaf of the hinge may be held in rigid relation to the lower leaf or removed therefrom, and one in which the parts may be readily adjusted for varying the degree of angle to which the upper leaf swings.

To these ends the invention comprises the novel details of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of my improved hinge applied to a hay-rack, a fragment of the latter only being shown. Fig. 2 is a central vertical section longitudinally of the hinge on the line 2 2 of Fig. 1, showing the upper leaf swung downward. Fig. 3 is a detail section on the line 3 3 of Fig. 1. Fig. 4 is a similar view on the line 4 4. Fig. 5 is an elevation of a slightly-modified form of lower leaf. Fig. 6 is a detail sectional view.

Referring to the drawings, 1 indicates the lower side-board of a wagon-body, and 2 the upper side-board, said parts being of the usual or any desired construction and material.

My improved hinge comprises, essentially, a lower fixed leaf 3, which is secured by screws or otherwise to the board 1, an upper relatively movable pivoted leaf 4, similarly secured to the upper board 2, and a brace rod or member 5, pivoted to one of the leaves, preferably the upper, and slidingly engaging the other.

The fixed leaf 3 comprises, preferably, an oblong body portion of tubular form in cross-

section, provided in its front wall with a central longitudinal slot 6, forming a pair of oppositely-disposed longitudinal flanges 7, a lower extension 8, which, as shown in Fig. 1, is flat and perforated at intervals for reception of attaching-screws, and a laterally-enlarged portion 9, formed at its upper end and recessed for the reception of the lower end of the leaf 4, the walls of the enlarged portion 9 being provided upon their inner faces each with a longitudinal semicircular groove 10, terminating at its lower end in a shoulder 11, the purpose of which will presently appear.

The pivoted leaf 4 is preferably in the form of an angle-bar having a central longitudinal groove 12, extending between longitudinal side flanges 13 13. The hinge 4 is provided upon the outer faces of its flanges 13 adjacent to its lower end with a pair of oppositely-disposed rounded lugs or studs 14, which normally engage one in either of the grooves 10 and rest upon the shoulder 11, thus forming the pivotal connection between the hinge-leaves. The hinge-leaf 4 is also provided at its lower end with slightly-extended spaced lugs 15, which when the leaf is moved to the inclined downward position, as in Fig. 2, engage through perforations in the rear wall of leaf 3 to prevent accidental upward displacement of the pivoted leaf.

The brace member 5 consists, preferably, of a suitable length of rod-iron provided at its upper end with an eye 16 for the reception of a pivoting-pin 17, which extends also through the flanges 13 of the link 4 for pivoting the brace member thereto, said brace being provided at its normally lower end with a head 18, adapted to travel in the guideway formed by the hollow body portion of leaf 3 and in movable engagement with the flanges 7, which latter prevent escape of the head from the guideway, as will be readily understood. In this connection it is to be noted that when the leaf 4 is swung on its pivot the head 18 will travel longitudinally of the guideway and will when brought to a stop at the lower end of the guideway serve to arrest the outer swinging movement of the movable leaf. Thus it is apparent that by providing the guideway with a series of removable blocks 19, as illustrated more clearly in Fig. 6, the

downward travel of the head within the guideway may be quickly adjusted for varying the relative angular position of the upper leaf. It is further to be noted that when the leaves
 5 are in longitudinal alinement the rod 5 will lie snugly within the guideway and the longitudinal groove 12, which constitutes, in effect, a continuation thereof, and that the parts may be secured in such relation by locking
 10 the rod 5 into the groove to prevent swinging of the former upon its pivot. For this purpose I employ a transverse pin 20, extending through suitable alined perforations in the flanges 13 and overlying the rod 5, although
 15 it is to be understood that any other suitable form of locking member may be employed for this purpose.

For preventing accidental escape of the leaf 4 when the parts are in the position as in
 20 Fig. 1 I provide a suitable bail or member 21, which is pivoted, preferably, to the upper end of leaf 3 and slightly eccentric with the pivotal axis of the upper leaf. This member normally engages a hook or other suitable device 22 upon the upper leaf 4 adjacent to its
 25 lower end. By this construction the downward swinging of the upper leaf is permitted without releasing the bail from the hook, and when the leaf is swung to a position in aline-
 30 ment with the lower leaf the bail will, owing to its slight eccentricity, exert a slight downward pull upon the movable leaf to prevent rattling of the parts. When, however, it is desired to remove the upper side-board 2, the
 35 bail 21 is released from the hook, which permits ready withdrawal of the upper leaf and the brace-rod 5, carried thereby.

In Fig. 5 I have shown a slight modification of the lower leaf 3, in which the extended por-
 40 tion 8', which corresponds to the lower extension 8 of Fig. 1, is of cylindrical form for extension through the base-board of the vehicle-body and is threaded for the reception of a nut for securing the base-board, as will
 45 be readily understood.

From the foregoing it will be seen that I produce a device of comparatively simple construction which will be efficient in operation, one which is admirably adapted for the at-
 50 tainment of the ends in view, and one which is readily applicable for use in other connections than that herein set forth—such, for instance, as pivoting the doors of show-cases or sustaining pivoted brackets or the like.
 55 In attaining these ends I do not limit myself

to the precise details herein shown and described, inasmuch as minor changes may be made therein without departing from the spirit or scope of my invention.

Having thus described my invention, what I claim is—

1. A hinge comprising a fixed leaf and a relatively movable leaf pivoted thereto, one of said leaves having a longitudinal slotted guideway, a brace member pivoted to the
 65 other leaf and having a head traveling in the guideway, said brace being adapted to normally lie within the guideway, and a pin extending transversely of the guideway and overlying the brace member to maintain the
 70 leaves in rigid longitudinal continuance.

2. A hinge comprising a fixed leaf having a longitudinal slotted guideway open at its upper end, a relatively movable leaf remov-
 75 ably and pivotally engaged with the fixed leaf, and a brace member pivoted to the removable leaf and having a head traveling in the guideway and adapted to be inserted and removed at the open end of the latter.

3. A hinge comprising a fixed leaf having
 80 a longitudinally-slotted upwardly-opening guideway, a relatively movable leaf, means for removably and pivotally engaging the latter with the former comprising lateral
 85 trunnions associated with one leaf and engaging longitudinal upwardly-opening grooves formed in the other, a brace member pivoted to the removable leaf and having a head trav-
 90 eling in and removably engaging the guideway, and means for locking the brace member to maintain the leaves in rigid longitudinal continuance.

4. A hinge comprising a fixed leaf having a longitudinal slotted guideway, a relatively
 95 movable leaf removably and pivotally engaged therewith, a brace member pivoted to the removable leaf and having a head traveling in and removably engaging the guideway, and a bail pivoted to one of the leaves and engaging a hook carried by the other for
 100 normally maintaining the leaves in engagement.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HARVEY S. CUNNINGHAM.

Witnesses:

J. L. CUNNINGHAM,
 R. W. CLARK.