

J. W. HILT.

END GATE.

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1,046,592.

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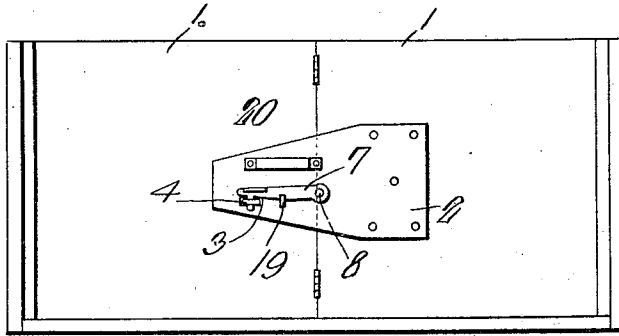


Fig. 1.

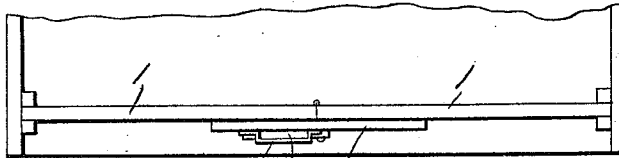


Fig. 2.

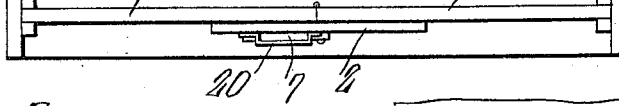


Fig. 4.

Fig. 3.

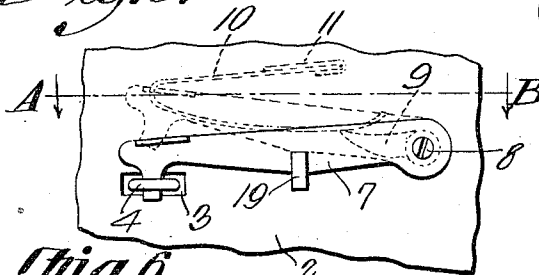


Fig. 6.

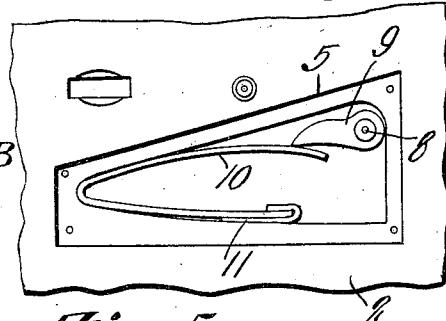
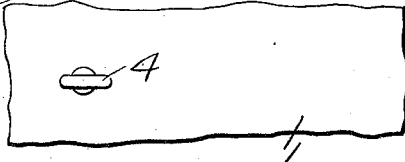


Fig. 5.

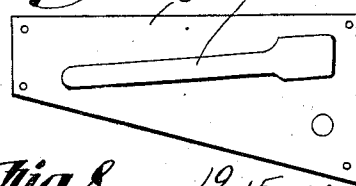
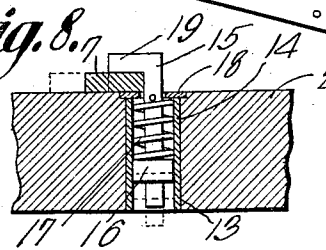


Fig. 8.



Witnesses

Fig. 7.

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END-GATE.

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To all whom it may concern:

Be it known that I, JOHN W. HILT, a citizen of the United States, residing at Rantoul, in the county of Champaign and State of Illinois, have invented a new and useful End-Gate, of which the following is a specification.

This invention relates to wagon end gates, its object being to provide improved means whereby, when the end gate is placed in position, it will be automatically locked.

A further object is to provide means for setting the lock when the end gate is removed.

A further object is to provide a lock which is simple in construction and the controlling parts of which are housed so as to be protected from injury.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is an elevation of an end gate having the present improvements combined therewith. Fig. 2 is a plan view of the parts shown in Fig. 1. Fig. 3 is an enlarged elevation of the latch, one of the positions of the latch being indicated by dotted lines. Fig. 4 is a rear elevation of a portion of the end gate extension or tongue with the face plate removed from the recess therein. Fig. 5 is a detail view of said face plate. Fig. 6 is an elevation of a portion of one of the end gate sections and showing the keeper thereon. Fig. 7 is a section on line A—B Fig. 3. Fig. 8 is a vertical transverse section through the latch and showing its supporting element in elevation, the tongue or extension being shown in section.

Referring to the figures by characters of reference 1 designates the hingedly connected sections of an end gate, one of the sections being formed with the usual tongue or extension 2 having a slot 3 therein designed to receive a staple 4 or other suitable keeper projecting from the other section of the end

gate. The extension 2 is formed in its inner or normally concealed face with a recess 5 normally closed by a face plate 6. A hook 7 is mounted on the outer or exposed face of the tongue 2 and has a stud 8 extending from one end thereof and into the recess 5 so as to thus constitute the pivot of the hook. A cam 9 is secured to and rotates with the stud and is located in the recess, this cam constantly bearing against one end of a leaf spring 10 which is housed in the recess and is secured to one wall thereof in any suitable manner. As shown in the drawings that end of the spring farthest removed from the cam is engaged by a hooked anchoring plate 11 fastened to one wall of the recess in any manner desired. As the intermediate or crown portion of the spring bears against one end of the recess 5 it will be apparent that displacement of the spring will be prevented by the face plate 6, the anchoring plate 11, and the walls of the recess 5. The face plate has a block 12 extending therefrom and between the terminals of the spring and constituting means for limiting the movement of the spring during the actuation of the cam 9.

A bore 13 extends through the tongue 2 and may be formed with a metal lining 14 in which a stem 15 is mounted to slide. This stem does not rotate and preferably has a collar 16 thereon fitting snugly upon the inner surface of the casing 14, said casing being angular in cross sectional contour. A spring 17 is housed in the casing and bears at one end against the collar 16 and at its other end against a cap 18 which closes one end of the casing and serves to hold the stem and spring in place. One end of the stem has an elongated head 19 extending radially therefrom and normally bearing against the tongue or extension 2. When thus located the lower edge of the hook 7 will rest thereon and be supported with the free end portion of the hook elevated out of engagement with the keeper 4. At this time the end of the stem 15 remote from head 19 will project beyond the inner face of the extension 2. It is of course to be understood that under these conditions the sections 1 of the gate are not in alinement and said gate is thus in condition to be placed in or removed from the wagon body. After placing the end gate in the wagon body the tongue 2 can be shifted so as to

bring the two end gate sections in alinement at which time the keeper 4 will extend through the slot 3. At the same time the end of stem 15 will press against the section 1 in the path thereof and thus be shifted longitudinally so as to remove the head 19 from under the hook 7. Simultaneously with this action the spring 10, which is under stress, shifts the cam 9 and causes the hook 7 to move automatically into engagement with the keeper 4.

When it is desired to unlock the gate the hook 7 is raised out of engagement with the keeper and the extension 2 is pulled outward by means of a handle 20 connected thereto. During this movement the stem 15 is shifted by its spring 17 so as to bring head 19 under the hook, thereby holding said hook elevated out of engagement with the keeper.

What is claimed is:—

1. An end gate including hingedly connected sections, a keeper upon one of the sections, a hook upon the other section for engaging the keeper, means for supporting the hook normally out of the path of the keeper, and means for automatically shifting said supporting means out of active position when the sections are brought into a predetermined relation.

2. An end gate including hingedly connected sections, a keeper upon one of the sections, a spring controlled hook movable with the other section, a supporting element for holding the hook out of the path of the keeper, and means for shifting said element to release the hook when the sections are brought into a predetermined relation.

3. An end gate including hingedly connected sections, a keeper upon one of the sections, a hook movable with the other section, an element for supporting the hook normally out of the path of the keeper and shiftable out of active position when the sections are brought into a predetermined relation.

4. An end gate including hingedly connected sections, a keeper upon one of the sections, a hook movable with the other section, an element for supporting the hook normally out of the path of the keeper and shiftable out of active position when the sections are brought into a predetermined

relation, and a spring for shifting the hook when released.

5. An end gate including relatively movable sections, a keeper upon one section, a hook movable with the other section and means for holding the hook in set position when the sections are out of active position, one of said sections constituting means for actuating the holding means to release the set hook when brought into register with the keeper.

6. An end gate including relatively movable sections, a keeper upon one of the sections, a hook movable with the other section, means for normally holding the hook out of the path of the keeper, one of said sections constituting means for shifting said holding means to release the hook when brought into register with the keeper.

7. An end gate including relatively movable sections, a keeper upon one of the sections, a hook movable with the other section, means for normally holding the hook out of the path of the keeper, one of said sections constituting means for shifting said holding means to release the hook when brought into register with the keeper, and a spring for automatically shifting the hook into engagement with the keeper, when released.

8. An end gate fastener including a keeper, a hook movable into register therewith, means for normally supporting the hook out of alinement with the keeper, means for shifting the supporting means for automatically releasing the hook when brought into register with the keeper, and means for shifting the released hook into engagement with the keeper.

9. A fastener for end gates including a keeper, a spring controlled hook, spring controlled means for supporting the hook out of engaging position, and means for automatically releasing the hook from its support when brought into register with the keeper.

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

JOHN W. HILT.

Witnesses:

JOHN F. STEINER,
J. W. HERRON.