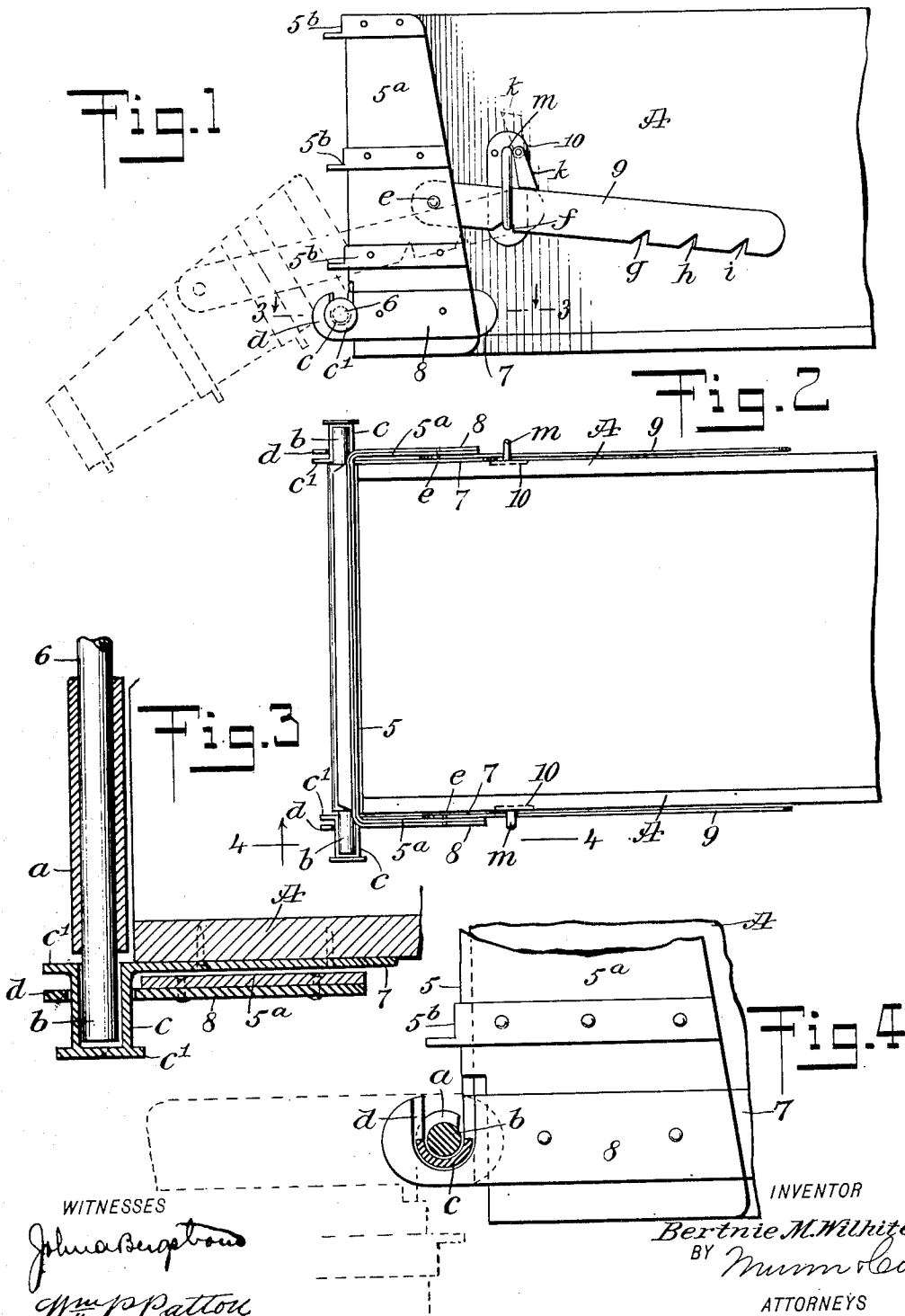


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B. M. WILHITE.
END GATE FOR WAGONS.
APPLICATION FILED JULY 2, 1907.



WITNESSES

John A. Beaton
Wm. J. Patton

INVENTOR

Bertnie M. Wilhite
BY *Mum & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

BERTNIE M. WILHITE, OF GORDON, NEBRASKA.

END-GATE FOR WAGONS.

No. 888,286.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed July 2, 1907. Serial No. 381,872.

To all whom it may concern:

Be it known that I, BERTNIE M. WILHITE, a citizen of the United States, and a resident of Gordon, in the county of Sheridan and State of Nebraska, have invented a new and Improved End-Gate for Wagons, of which the following is a full, clear, and exact description.

This invention relates to removable end gates for freight wagons, and has for its object to provide novel details of construction for a device of the character indicated which render it very strong, durable and light; furthermore, that adapt the end gate to receive different inclinations from a vertical plane, or be dropped into pendent adjustment for opening the rear end of the wagon bed it normally closes, the gate being readily removable when in pendent adjustment.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of the improved end gate, shown adjusted in closed position on the rear end portion of a wagon body by full lines and inclined rearward therefrom by dotted lines; Fig. 2 is a plan view of the wagon body and of the improvements thereon in closed adjustment; Fig. 3 is an enlarged sectional plan view of novel details, substantially on the line 3—3 in Fig. 1, and Fig. 4 is a partly sectional side view of details, substantially on the line 4—4 in Fig. 2.

The improved end gate is preferably formed of plate metal, consisting of a flat portion 5, that is of a rectangular marginal form, having sufficient area to adapt it for complete closure of the opening at the rear end of a box wagon body A when in position thereat.

A projecting integral wing 5^a is formed on each end of the gate 5, those wings that are disposed at right angles to said gate having a loose contact with the outer sides of the wagon body A, when in position for use.

As indicated, the sides or wings 5^a of the end gate are narrowed somewhat toward their normally upper ends and the gate and wings are strengthened by securing angle iron bands 5^b thereon at suitable points, but

to avoid bulk at the outer surfaces of the wings, the ribs on each of these braces are removed, leaving flat bars for attachment upon the latter, as represented in the drawings.

Upon the normally lower transverse edge of the gate 5, a tubulation *a* is formed, wherein a cylindrical rod 6 is inserted and secured, the ends of said rod extending beyond the wings 5^a far enough to provide similar journals *b*.

Upon the sides of the box body A, near their lower edges and rear ends, two similar bracket arms 7 are secured, each of said bracket arms having a box *c* thereon, that projects laterally from the wagon body, and each receives in its open upper side, a respective journal *b*, which connection adapts the gate and wings thereon to rock upon the boxes *c* and receive different inclinations, as will be further explained hereinafter.

The exteriors of the boxes *c* are cylindrical and may have radial flanges *c'* at their ends, and to facilitate the manufacture of the bracket arms, they may with advantage be cast into form from suitable material.

Upon the wings 5^a, near their normally lower ends, two similar guard plates 8 are secured, each having a hook formation *d* on one end, these hooks, that have their openings disposed upwardly, being oppositely positioned and receive the box formations *c*.

It will be seen that the guard plates 8, by their hooked engagement with the boxes *c* above which the sides of the hooks *d* project, serve to prevent the end gate from being displaced, or in other words, keep the journal ends *b* in the boxes *c* when the gate 5 and wings 5^a are in a closed or inclined position.

Upon each wing 5^a, above the guard plates 8 and at opposite points, one end of a latch bar 9 is pivoted, as shown at *e* for one latch bar in Fig. 1. Each latch bar 9 has four hook-like notches *f*, *g*, *h* and *i* formed in its lower edge at suitable distances apart.

A keeper plate 10 is secured upon each side of the wagon body A conveniently near the pivot *e* on each wing 5^a when the gate is closed, and upon each keeper plate a latch loop *m* is secured through which extends a respective latch bar 9. The latch loops *m* are in flattened staple form, and permit the free rocking adjustment of the latch bars 9.

It will be seen in Fig. 1, that when the end gate 5 is disposed vertically for closure of the rear end of the wagon body A, the weight of

the latch bars 9 will cause an engagement of the lower end of a respective latch loop *m*, within the notch *f* on a respective bar 9, and the shoulders on said notches will hold the bars from displacement, thus locking the gate in closed condition. A latch dog *k* is pivoted by one end above each latch bar 9, as shown in Fig. 1, and when rocked downward will lock said bars in their adjusted positions.

If it is desirable to incline the end gate outward and downwardly from the wagon body, to adapt it for the convenient reception of material that is to be loaded, this can be effected by adjusting the latch bars 9, so that the next notches in sequence, *g*, will have a hooked engagement with the lower ends of the latch loops *m*.

To lengthen the wagon bed or bottom of the body for reception of long timber or other material longer than the body A, the latch bar 9 is moved so that the hook notches *h* engage the latch loops *m*.

If the end gate is to be used as a skid for unloading coal, ice, sand or other material, the latch bars 9 are moved rearward, so that the notches *i* will receive the lower ends of the latch loops *m*, this adjustment being indicated by dotted lines in Fig. 1.

Should it be of advantage to remove the end gate or permit it to hang pendent, a release of the latch bars 9 will permit the gravity of the gate and the wings thereon to dispose them as indicated by dotted lines in Fig. 4, and it will be seen that the openings of the hooks *d* on the guard plates 8 will be turned downward, which will permit the end gate to be removed from the wagon body by lifting it upward, as the journal ends *b* will pass out of the boxes *c*, and the hooks *d* simultaneously elevated above said boxes.

It is claimed for this improvement that it may be applied upon wagons having box bodies of usual form, that it dispenses with screw bolts or clamps, is instantly adjusted to give it four advantageous positions for service, and that it may be removed so as to allow the wagon body to be backed against a wall or other stable object when the exigencies of service render this advantageous or necessary.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination of a wagon body having open bearings projecting therefrom, and an end gate having side wings, the body of the gate being provided with journals enter-

ing the bearings and the wings with hooks engaging said bearings.

2. The combination of a wagon body having laterally projecting bearings, said bearings being open at their upper sides, and an end gate having side wings, the body of the gate having journals entering the bearings and the wings hooks, the openings of which are disposed upwardly, said hooks engaging the bearings.

3. The combination of a wagon body having laterally projecting bearings, said bearings being open at their upper sides and provided with flanges, and an end gate having side wings, the body of the gate being provided with projecting journals entering the bearings and the wings with hooks engaging the bearings between the flanges thereof, the openings of the hooks being disposed upwardly.

4. The combination with a wagon box body, of an end gate formed of metal plate, integral wings on the end gate, lateral journal ends on the lower edge of the end gate, bracket plates having open boxes on their outer ends and secured on the sides of the wagon body, said boxes receiving the journal ends, guard plates on the wings, having hook-like ends that engage with the exteriors of the open boxes, and means carried on the wagon body, adapted for holding the end gate closed or inclined in different positions.

5. The combination with a wagon box body, of an end gate formed of plate metal having integral wings, means for reinforcing the gate and wings, lateral journal ends on a rod held in a tubulation on the lower edge of the gate, bracket plates secured on the sides of the wagon body and having open boxes thereon which receive the journal ends, guard plates on the wings, having hook members that engage the boxes, a latch bar pivoted on each wing and having notches in its lower edge, and a keeper plate on each side of the box body, having a latch loop through which a respective latch bar slides and may have any notch therein engaged with a respective latch loop, for holding the end gate closed or inclined in different positions.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BERTNIE M. WILHITE.

Witnesses:

W. E. MITCHELL,
F. W. SELLORS.