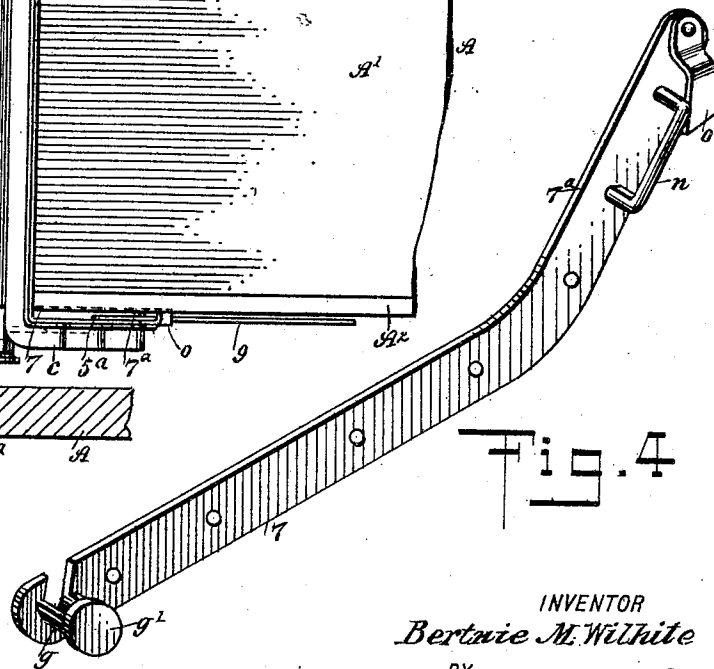
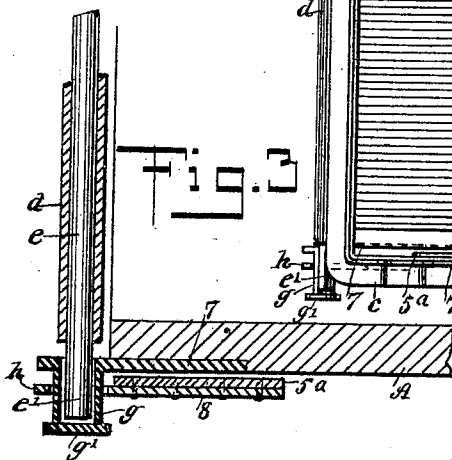
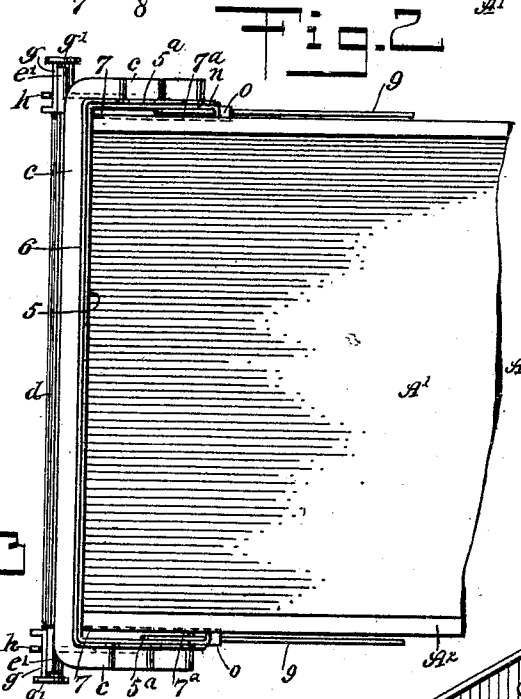
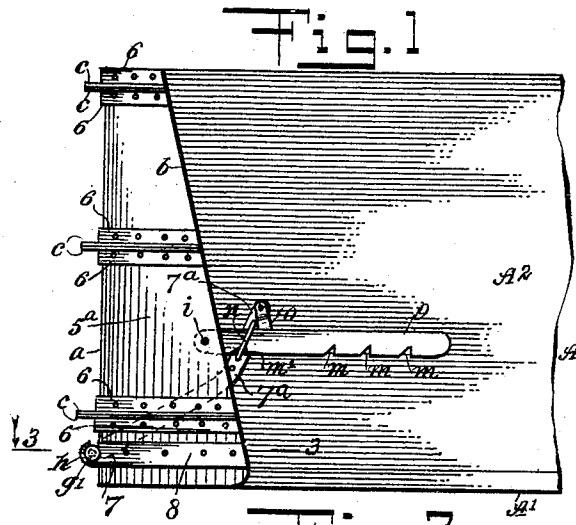


B. M. WILHITE.
 END GATE FOR WAGONS.
 APPLICATION FILED JULY 22, 1908.

933,514.

Patented Sept. 7, 1909.



WITNESSES

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BERTNIE M. WILHITE, OF GORDON, NEBRASKA.

END-GATE FOR WAGONS.

933,514.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed July 22, 1908. Serial No. 444,747.

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 new and useful Improvements in End-Gates for Wagons, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide additional features of improvement for the end gate for which Letters Patent were granted to me, dated May 19, 1908, and numbered 888,286, whereby portions of the end gate are strengthened and other details rendered more compact and inexpensive.

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

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 improvement applied upon an end gate, shown closed upon the rear end of a wagon body; Fig. 2 is a plan view of the parts shown in Fig. 1; Fig. 3 is a sectional plan view, on the line 3-3 in Fig. 1, and Fig. 4 is an enlarged perspective view of a detail that embodies novel features of construction.

In the drawings, A represents the rear end of a box body of a freight hauling wagon, consisting, as usual, of a bottom A' formed of boards or planking, and sides A² of a similar material.

The end gate whereon the novel features are mounted, is formed of plate metal having parallel upper and lower edges, and a width considerably greater than is necessary for a closure of the open rear end of the wagon body.

The portion 5 that forms the end gate proper is flat, and has sufficient length for a lapped engagement of its ends with the rear ends of the sides A², and at two points *a*, which determine the length of the end gate 5, the material is bent at right angles in the same direction, thus producing two integral wings 5^a which, in service, loosely contact with the outer surfaces of the sides A² of the wagon body A. The wings 5^a are sloped on their free edges *b*, so as to reduce their width gradually toward their upper ends, as shown for one wing in Fig. 1.

A feature of the present invention consists in the employment of angle iron reinforcing bands 6, that in this construction are associated in pairs, said bands in duplicate being so placed as to impinge their outstanding flanges *c, c* upon each other. The bands in pairs, as described, are bent so as to fit closely upon the exterior surface of the end gate plate and the wings thereon. Three pairs of the angle iron bands 6 are provided, and securely affixed in place upon the end gate and wings by rivets or bolts, one pair of bands being located at the lower edge of the end gate and its wings, another pair at their upper edges and the third pair midway between the other pairs.

It will be seen that as the ribs formed by the flanges *c, c* on the pairs of angle iron bands are continuous from side edge to side edge of the wings 5^a, greater rigidity and strength are conferred by the substitution of the angle iron bands that are continuous, for those shown and described in Letters Patent No. 888,286.

A tubulation *d*, formed on the lower transverse edge of the gate 5, receives a shaft *e* that is secured therein, said shaft projecting outside of the gate at each side edge thereof, providing journals *e'* thereon.

Upon the sides A² of the body A two similar bracket arms 7 are oppositely secured, which are set in flush with the surface of the bed to permit the end gate wings 5^a to freely slide thereover, when said end gate is in closed condition. The bracket arms 7 in the present construction are each provided at their lower ends with an outwardly projecting box bearing *g*, which are disposed oppositely at the lower rear corners of the side walls A² of the body A, and preferably said boxes, that are cylindrical and open on their upper sides, have their outer ends closed by transverse walls *g'*, that project radially and form circumferential flanges thereon. The journal ends *e'* of the shaft *e* are adapted to seat removably in the boxes *g* and thus afford a rocking connection for the end gate with the wagon body at its rear end.

A guard plate 8 is secured upon each of the wings 5^a near the lower edges thereof, the rear ends of said plates each terminating in a hook *h*, that opens upwardly. The hooks *h* are sufficiently extended rearward to permit the free insertion therein of the cylindrical boxes *g*.

Upon each wing 5^a, at a proper distance above the guard plates 8, a latch bar 9 is pivoted at one end, as shown at *i* for one latch bar in Fig. 1. Each latch bar is furnished with spaced hook notches *m* in its lower edge, that are designed for engagement with a fixed projection from the respective side A² of the body A.

A feature of the present improvement consists in the extension of each bracket arm 7 upward and forward, of sufficient length to adapt it to serve as a keeper plate for the latch bar 9; and to this end, a staple loop *n* is projected outward from each bracket arm near the upper end thereof, through which a respective latch bar is loosely inserted.

It will be seen that the extension of the bracket arms 7, as indicated at 7^a in Fig. 1, serves to afford support for the latch bar 9 and permits the latter to slide through the staple *n* when the end gate is rocked outward. On the upper end of the extension 7^a of each bracket arm 7, a dog *o* is pivoted, and in each latch bar a notch *m'* is formed that will receive the lower end bar of a respective staple loop *n* when the end gate is closed, this engagement of the latch bars with the staple loops being detachably secured by turning each dog *o* so that its free end bears upon the upper edge of the complementary latch bar.

It will furthermore be noted that by an engagement of either notch *m* in the latch bars 9 that are opposite in pairs, with the staple loops as explained, the end gate may be secured at a desired outward inclination, or in a horizontal position.

It will be seen that the means for reinforcing the end gate and wings by the employment of angle iron bands in pairs is an

advantageous feature of the present improvement. Furthermore, the formation of the bracket arms 7 with the upward integral extensions 7^a, so that said arms serve the two-fold purpose of supporting the end gate for its rocking adjustment and also for limiting the outward inclination of said end gate, is an important detail of the present improvement. Said bracket arms, by the support of the dogs *o* on their upper ends serve to strengthen the connection of the parts and reduce their number, thus cheapening the manufacture of the improved end gate.

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

In a device of the class described, the combination with a wagon body, of an end gate provided with wings embracing the sides of the body, bracket arms having laterally projecting boxes, the end gate having trunnions received in the boxes, the arms having upward extensions secured to the sides of the wagon body, loops on the extensions adjacent to the ends thereof, dogs on the extensions above the loops, a latch bar pivoted to each end gate wing, and extending through the loop, said bars having notches in the lower edge thereof for engagement by the loop, the upper edge being engaged by the dog.

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

BERTNIE M. WILHITE.

Witnesses:

M. O. HARTSOOK,
FRANK I. LETSON.