

No. 713,262.

Patented Nov. 11, 1902.

J. F. WHITE.

END GATE.

(Application filed July 1, 1902.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

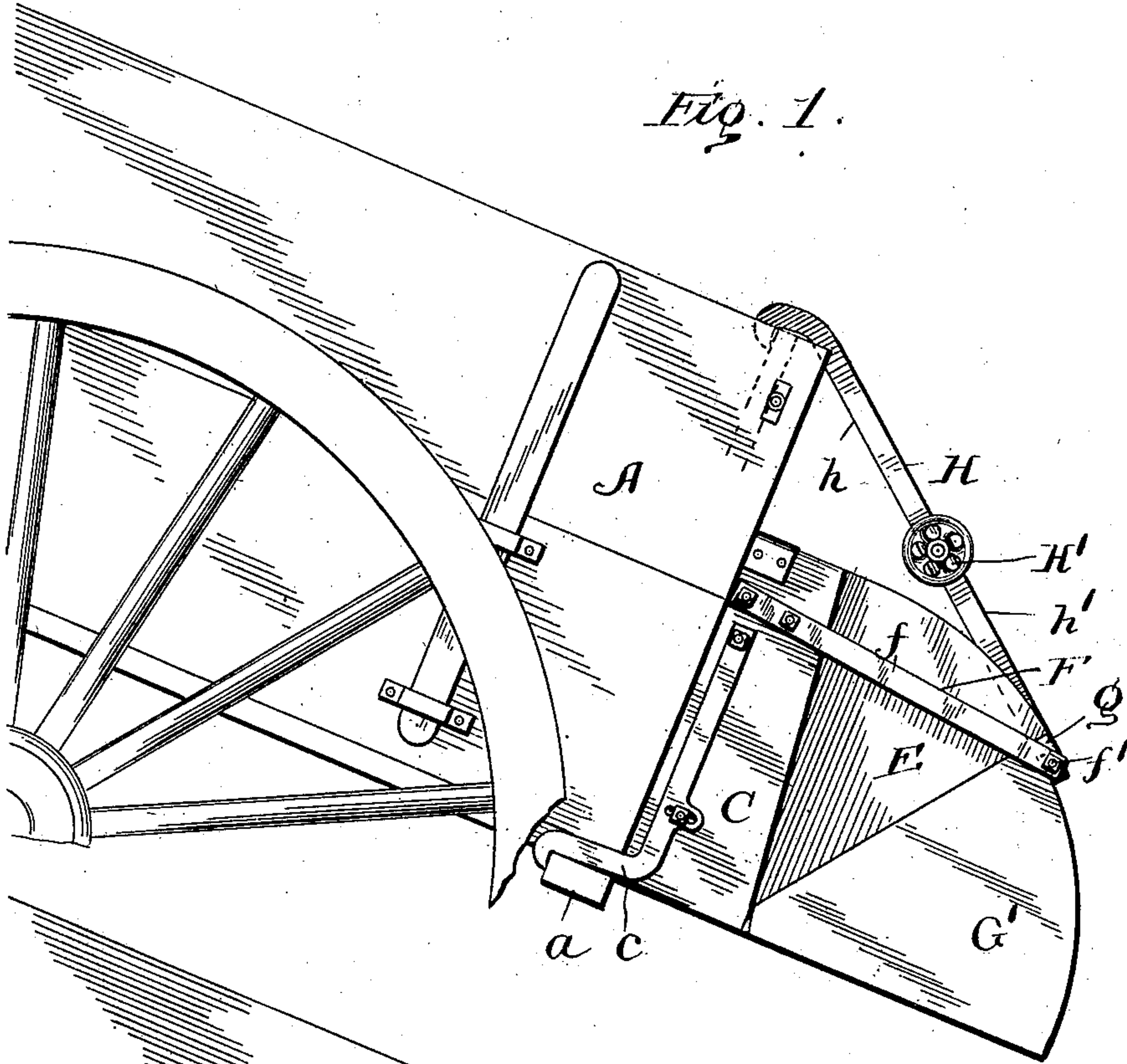
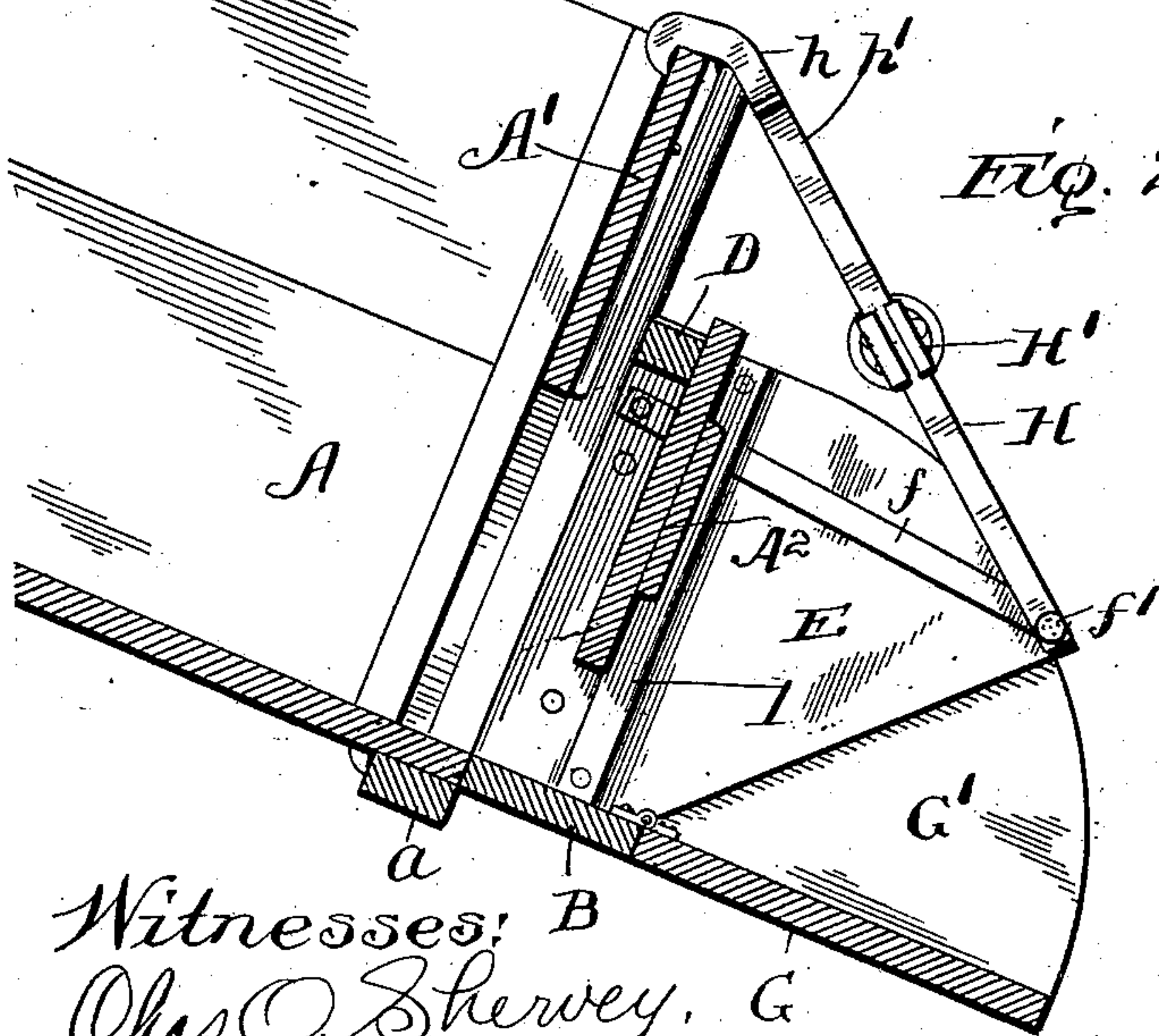


FIG. 2.



Witnesses: B
Chas. O. Shervey, G
S. Bliss.

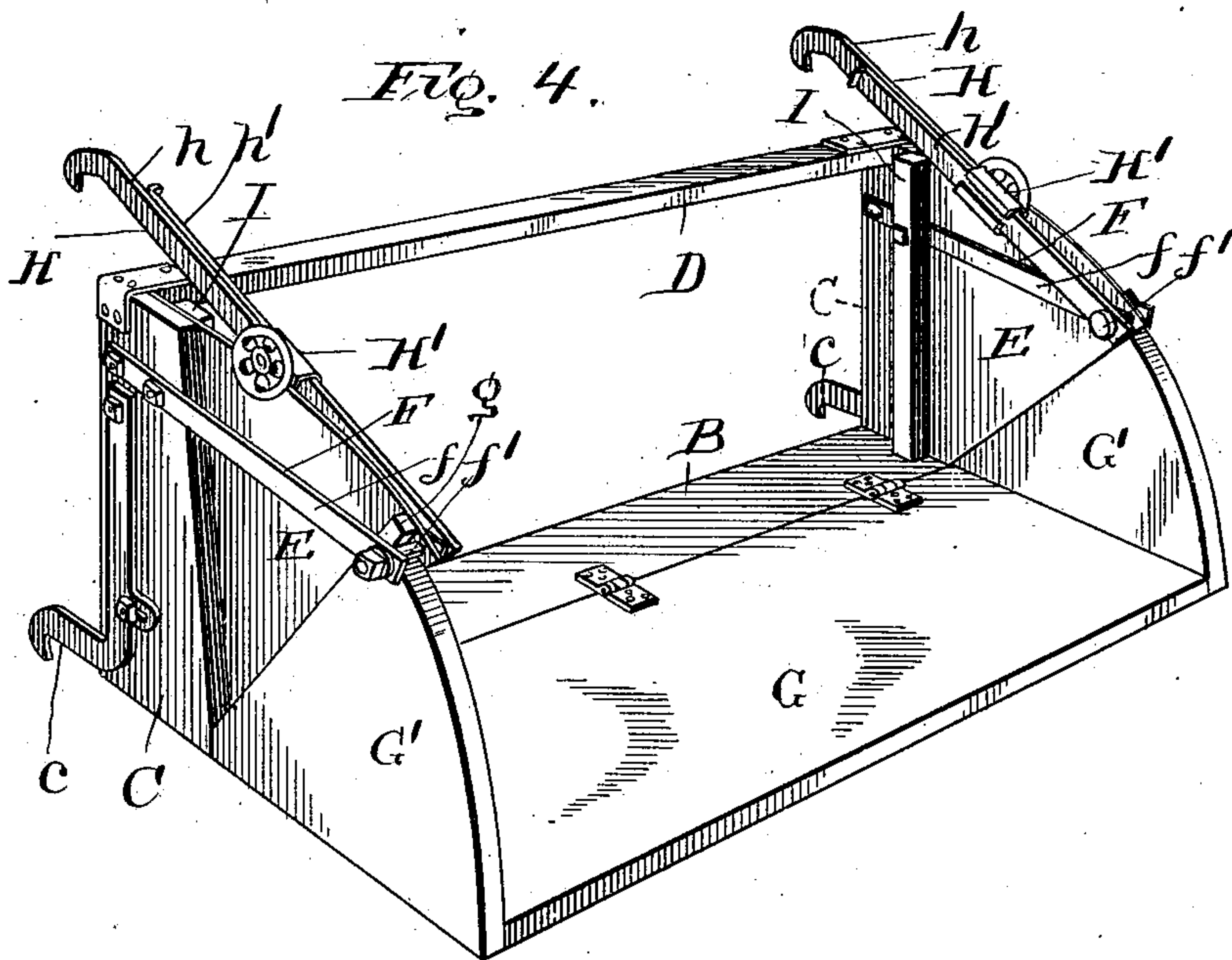
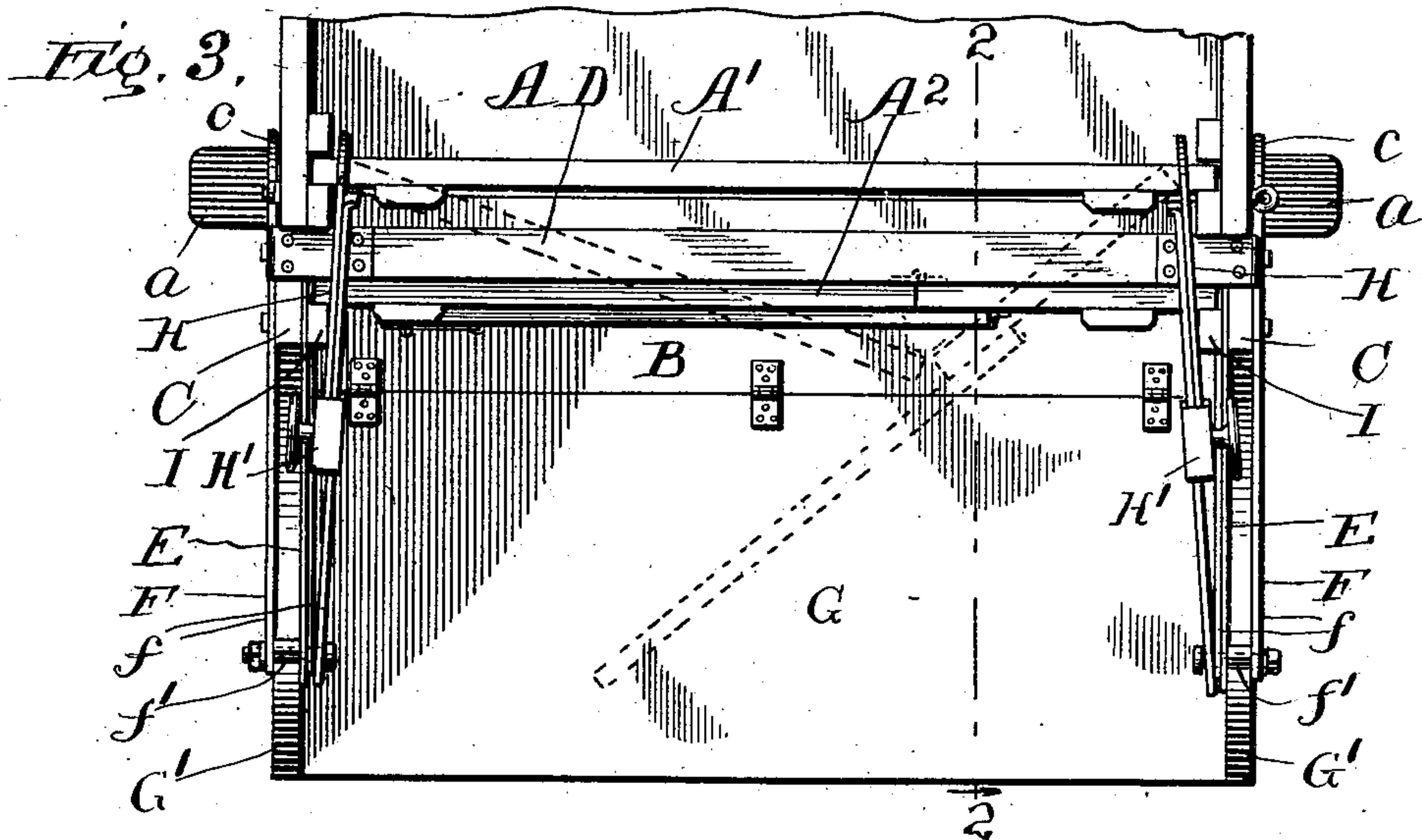
Inventor:
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UNITED STATES PATENT OFFICE.

JOHN F. WHITE, OF RACINE, WISCONSIN.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 713,262, dated November 11, 1902.

Application filed July 1, 1902. Serial No. 113,909. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. WHITE, a citizen of the United States of America, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in End-Gates, of which the following is a specification.

My invention relates to certain new and useful improvements in end-gates for wagons; and its object is to provide a device of this class which can be readily removed from and attached to a wagon, which can be used with a wagon which is dumped backward, and which can be used to control the flow of material as desired.

To these and certain minor ends my invention consists in certain novel features of construction, which are clearly shown in the accompanying drawings and described in this specification.

In the drawings, Figure 1 is a side elevation of the rear part of the wagon having my end-gate attached. Fig. 2 is a vertical longitudinal section through the same in the line 2 2 of Fig. 3 looking in the direction of the arrow. Fig. 3 is a top plan of the same, and Fig. 4 is a perspective of the end-gate removed from the wagon.

Referring to the drawings, A is the box of an ordinary wagon, having the usual transverse bar *a* projecting from the two sides of the box at the bottom and having also the rear board made of two sections *A'* *A*², running between cleats on the sides of the box. The bottom section *A*² is of the ordinary form, which is hinged in the middle, so as to be readily removed independently of the upper board *A'*.

A main frame is secured to the rear end of the box A. This frame is rectangular in form and consists of a bottom board B, two uprights C, and a cross-piece D. These portions are securely fastened together and made as rigid as possible. The uprights C are provided with hooks *c*, preferably of iron, which hook over the transverse bar *a* at the bottom of the box of the wagon. The hooks *c* are pivoted at their upper ends and have a limited movement to permit the gate to accommodate itself to wagons where the piece *a* is at different distances from the hook. To the

inside of the uprights C are rearwardly-extending plates E, preferably of sheet metal. The outline of these plates is clearly shown in the drawings, and to all intents and purposes they form offset extensions of the uprights C, the extending portions being in shape, roughly, segments of a circle. Two loops F run back from the uprights C to the rear end of the metal plates E. These loops are formed of side pieces *f* and a bolt *f'*, joining them at their ends. A flap G is hinged to the rear end of the bottom board B and is provided with side pieces *G'*, in shape segments of a circle. These side pieces have small radial extensions *g*, which when the flap G is opened—that is, when in the position shown in Fig. 4—engage the bolts *f'* of the loops F. It will be seen that the side pieces *f* of the loop F, together with the metal plates E, form guides in which the radial extensions *g* can run and be properly guided. To the outer ends of the loops F are attached hooks H, made in two parts *h h'*, respectively, these parts being relatively movable. Clamps H' fix the relation of these two parts as may be desired. The hooks H, as shown in the drawings, hook over the top piece *A'* of the back board of the wagon. They are so adjusted as to make the plane of the bottom board B of the end-gate lie in the same plane with the bottom of the wagon-box and form a continuation thereof. Two cleats I extend vertically along the inside of the uprights C and metal plates E, and their use is to receive the bottom half *A*² of the back-board of the wagon.

The operation of the end-gate will be readily apparent. It is hooked in place and adjusted as heretofore described, and the bottom half of the back board of the wagon is removed and slid back against the cleats I, where it can be raised or lowered, as desired, to vary the size of the opening from the wagon-box. The front end of the wagon is tipped up by a wagon-jack used for unloading it, and the rear end of the box is consequently lowered, as shown in Figs. 1 and 2. The end eventually reaches the elevator which is in use for carrying off and unloading the material, and with the ordinary type of end-gates injury might result either to the elevator or

to the end-gate itself on account of its striking as the rear end of the wagon came down. With my improved end-gate, however, the flap G merely folds up toward the wagon, and the flow of grain or other material keeps up uninterrupted. Another advantage of this construction is that the side walls of the end-gate are high and form a spout from which grain can be readily directed. Furthermore, the construction is such that the back board of the wagon itself can be used to control the flow of grain. This is an obvious advantage.

I realize that considerable changes could be made in the details of this construction without materially departing from the spirit of the invention, and I do not, therefore, desire to limit myself to the specific form herein shown.

I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a suitable rectangular frame and a spout hinged thereto, of means for attaching said rectangular frame to the rear of a standard wagon, said means being independent of the cleats by which the end-board of said wagon is held in place, substantially as described.

2. In a device of the class described, the combination with a suitable rectangular frame and a spout hinged thereto, of suitable means on said frame for securing the same to the rear of a standard wagon independently of the cleats on said wagon by which the end-board thereof is held in place, substantially as described.

3. In a device of the class described, the combination with a suitable rectangular frame of substantially the size of the rear of a wagon, of hooks upon the lower portion of said rectangular frame adapted to engage the rear transverse cross-bar of said wagon and hooks connected to the upper portion of said frame

and adapted to engage the back board of said wagon, substantially as described.

4. In a device of the class described, the combination with a suitable rectangular frame, of suitable hooks in the bottom portion thereof adapted to engage the rear transverse bar on the bottom of said wagon, said hooks being pivoted upon said rectangular frame and having a slight movement with respect thereto about their pivots whereby they can be attached to various wagons and hooks attached to the top of said rectangular frame and adapted to engage the top of the rear board of the wagon, substantially as described.

5. In a device of the class described, the combination with a suitable rectangular frame, hooks on the lower part thereof, adapted to engage the rear transverse bar on the bottom of a wagon, of suitable hooks connected to the top part of said rectangular frame and adapted to engage the top of the rear board of the wagon, and means for adjusting the length of said top hooks, substantially as described.

6. In a device of the class described, the combination with a rectangular frame, a suitable flap pivoted to the rear end thereof and side pieces on said flap forming, with the side pieces on said rectangular frame a spout, of suitable cleats on the inside of said rectangular frame adapted to receive the rear board of a wagon, and means for attaching the entire structure to the back of a wagon, substantially as described.

In witness whereof I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, this 23d day of June, A. D. 1902.

JOHN F. WHITE.

Witnesses:

CHAS. O. SHERVEY,
S. BLISS.