

(No Model.)

C. H. CHAIN.
END GATE.

No. 472,523.

Patented Apr. 12, 1892.

FIG. 1.

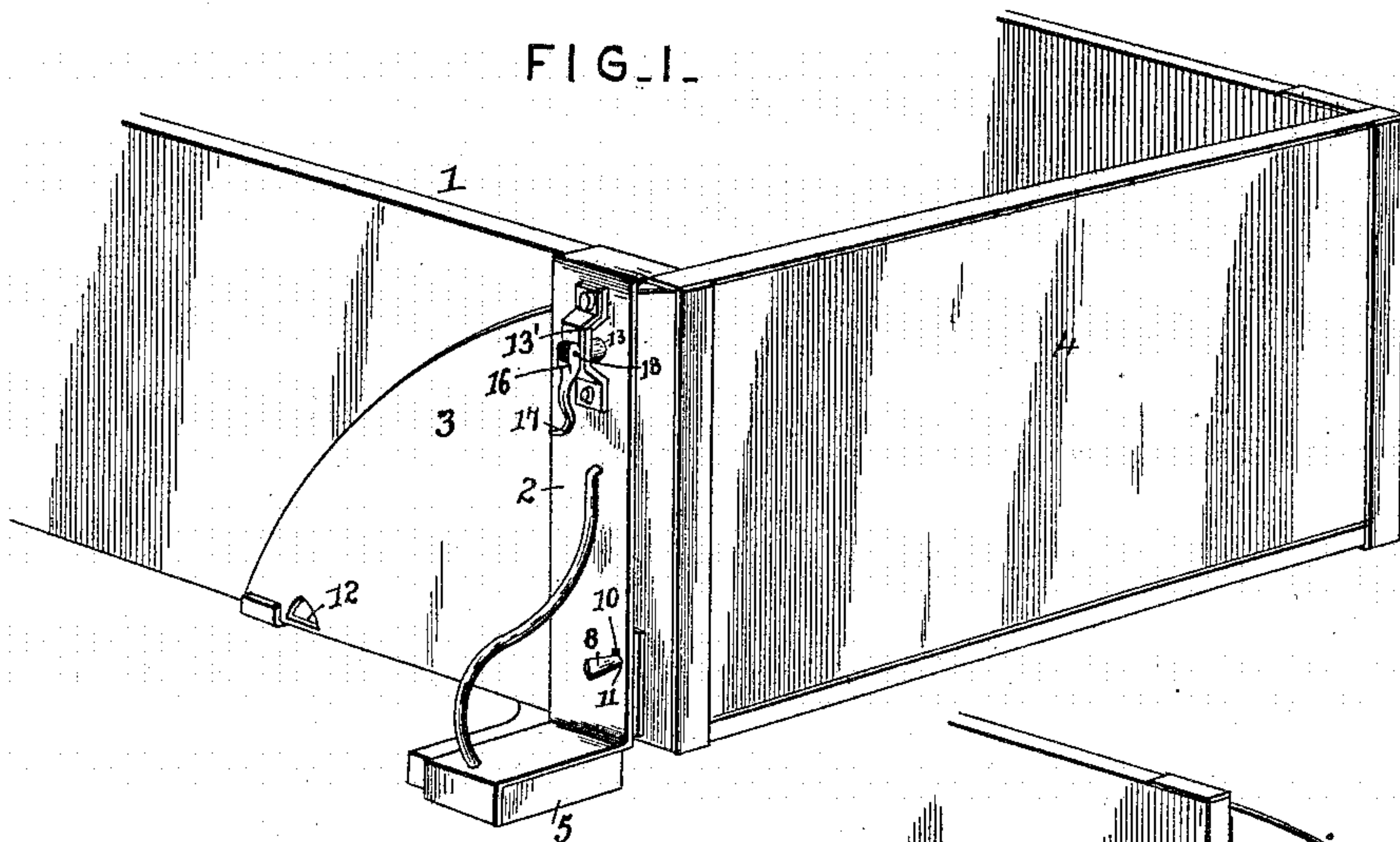


FIG. 2.

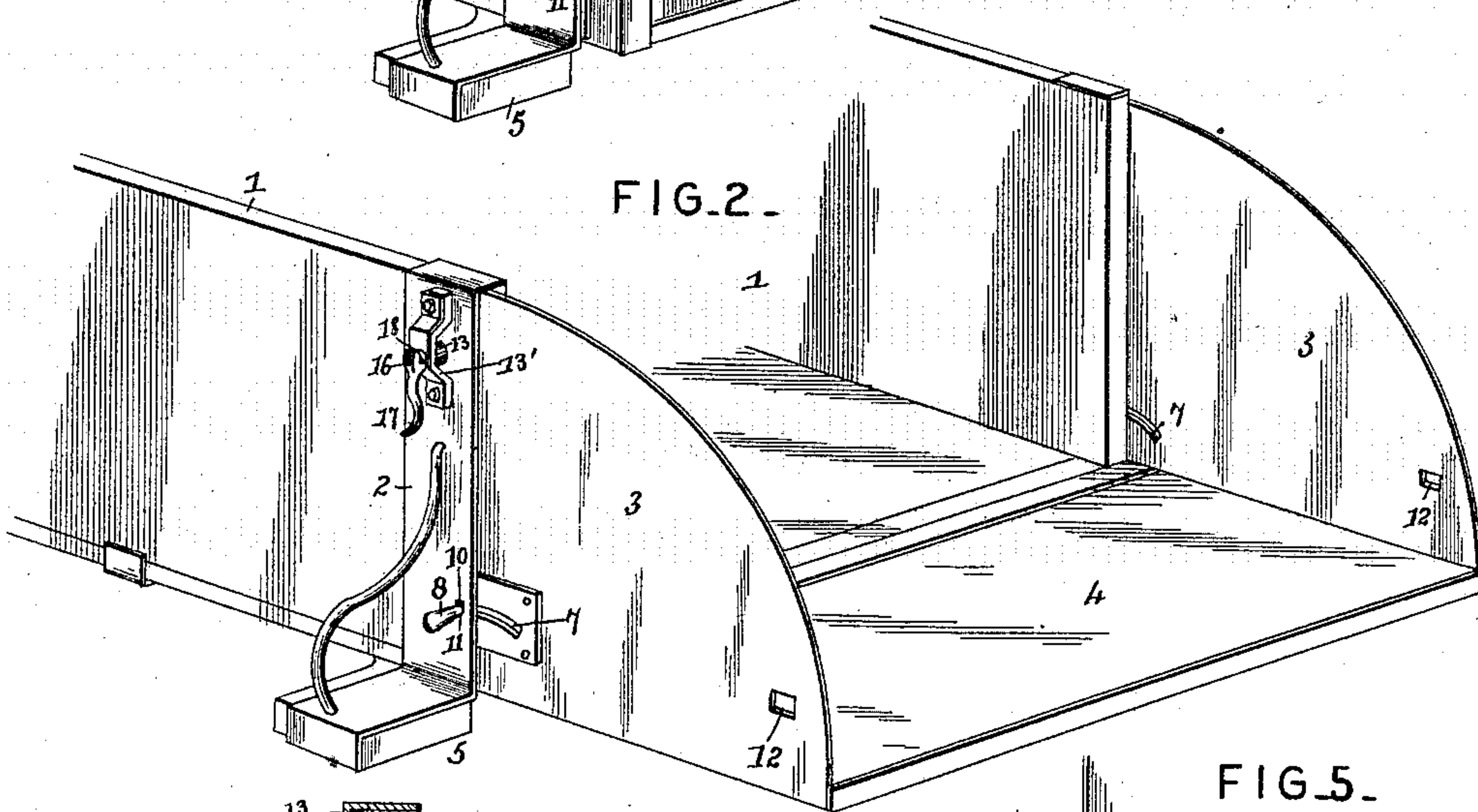


FIG. 3.

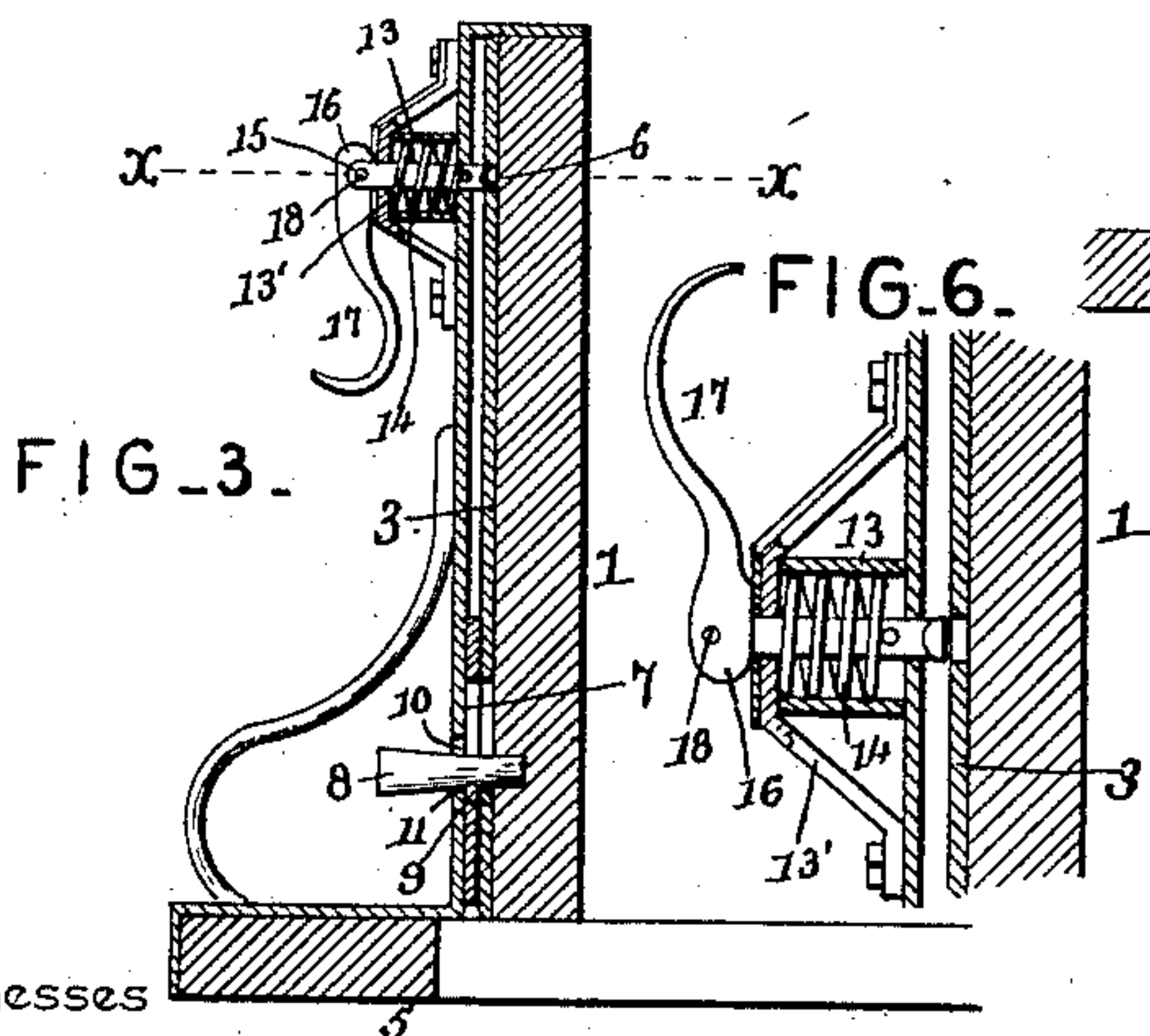
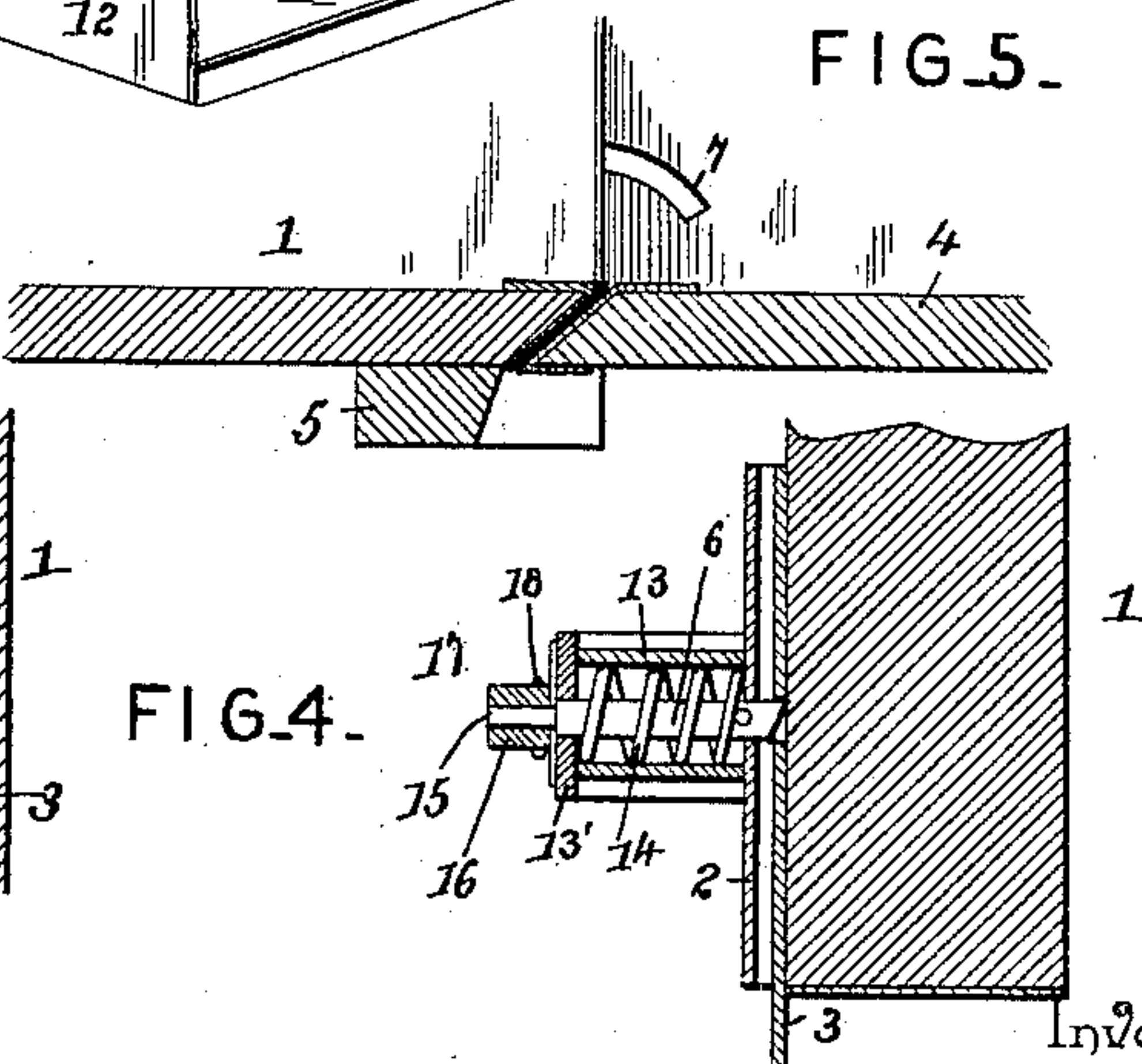


FIG. 4.



Witnesses

Inventor

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UNITED STATES PATENT OFFICE.

CHARLES H. CHAIN, OF ALLIANCE, OHIO.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 472,523, dated April 12, 1892.

Application filed July 17, 1891. Serial No. 399,834. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. CHAIN, a citizen of the United States, residing at Alliance, in the county of Stark and State of Ohio, have invented a new and useful End-Gate, of which the following is a specification.

The invention relates to improvements in end-gates.

The object of the present invention is to provide a simple and inexpensive end-gate which will be adapted to be readily lowered for scooping and to form a platform at the rear end of a wagon-body, and which will be securely locked when down and when closed, and be prevented accidentally slipping, and which may, if desired, be readily removed from the wagon-body.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of an end-gate constructed in accordance with this invention and shown applied to a wagon-body and being closed. Fig. 2 is a similar view, the end-gate being lowered. Fig. 3 is a transverse sectional view through one side of the wagon-body. Fig. 4 is a detail sectional view on line X X of Fig. 3. Fig. 5 is a detail sectional view of the end-gate and the bottom of the wagon-body. Fig. 6 is a detail sectional view showing the lever swung upward to retract the bolt.

Referring to the accompanying drawings, 1 designates a wagon-body provided at its rear end with straps 2, arranged on the outer faces of its sides and forming spaces between them and the sides for wings 3 of an end-gate 4, and which have their ends secured to the upper edges of the sides of the wagon-body and to the extended ends of a bottom cleat 5. The wings are constructed of sheet metal and are quadrant shape, and are adapted to close the space at the ends of an end-gate when the latter is lowered in the usual manner. They are secured to the ends of the end-gate, and are hinged at their angles to the wagon-body, and are locked when the gate is in a vertical and a horizontal position by spring-actuated bolts 6. Near their angles the wings are pro-

vided with curved slots 7, adapted to be engaged by removable pintles 8, which are arranged in openings of the straps and the sides of the wagon-body, and are provided with lugs 9 to prevent displacement, and the straps 2 are provided with notches 10, communicating with the openings 11 to permit the insertion of the lugs 9, and the pintles are adapted to be turned to carry the lugs 9 away from the notches, whereby the pintles are locked and are prevented being accidentally displaced and becoming lost.

The spring-actuated bolts 6 are adapted to engage openings 12 of the wings, and these openings are arranged near the ends of the curved edges of the wings, and the bolts have their inner ends beveled, and the beveled faces are arranged in the rear, so that the bolts will engage the wings and prevent the end-gate dropping, but will allow the end-gate to be readily raised from a horizontal to a perpendicular position. Sleeves 13 are interposed between the straps 2 and keepers 13' and are adapted to receive the bolts and springs 14, which hold the bolts in engagement with the wings and which have their inner ends engaging shoulders of the bolts and their outer ends bearing against the inner faces of the keepers. The outer ends 15 are reduced and pivoted within bifurcations 16 of levers 17, arranged on the outer faces of the keepers and adapted to withdraw the bolts from engagement with the wings and to hold the bolts out of such engagement. The free ends of the levers are curved to form handles, and the bifurcated ends are enlarged, and the pivots 18 are arranged at the inner sides of the levers when the latter depend from the bolts, whereby when the levers are raised the bolts will be withdrawn from engagement with the wings to permit the latter to be lowered.

The vertical edges of the rear ends of the sides of the wagon-body are bound by metal straps, and the rear end of the bottom of the wagon-body and the adjacent edge of the end-gate are beveled and are covered with sheet metal, and they make a close joint to enable the contents of the wagon-body to be shoveled therefrom without liability of spilling them through the space between the end-gate and the bottom of the wagon-body.

It will be seen that the end-gate is simple, strong, and durable, and is adapted to be readily lowered for shoveling and to provide a stand, and is capable of being securely
5 locked when in a vertical or a horizontal position.

What I claim is—

1. The combination of a wagon-body, sheet-metal straps 2, secured to the rear end thereof and forming spaces, an end-gate, sheet-metal wings secured to the end-gate and arranged in the spaces formed by the straps 2 and provided at their angles with curved slots, the pintles engaging the slots, and the bolts
10 arranged to engage the wings, whereby the end-gate is locked, substantially as described.

2. The combination of a wagon-body, metal straps 2, secured to the rear end thereof and forming spaces and provided with openings
20 11 and notches 10, communicating therewith, an end-gate, sheet-metal wings secured to the end-gate and arranged in the spaces formed by the straps 2 and provided with curved slots arranged at the angles, the removable
25 pintles provided with lugs and arranged in the openings of the straps and engaging the curved slots, substantially as described.

3. The combination of a wagon-body provided with straps 2, forming spaces, an end-gate, quadrant-shaped sheet-metal wings provided at their curved edges with openings and having curved slots at their angles, pintles engaging the slots, keepers arranged on the

straps, spring-actuated bolts arranged in the keepers and adapted to engage the openings
35 of the wings, the levers and the pivots connecting the levers to the bolts and arranged near one side of the levers, whereby the levers are adapted to hold the bolts out of engagement with the wings, substantially as described.
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4. The combination of a wagon-body, sheet-metal straps 2, secured to the rear end thereof and forming spaces, an end-gate, sheet-metal wings secured to the end-gate and arranged in the spaces formed by the straps 2
45 and provided at their angles with curved slots, and the pintles engaging the slots, substantially as described.

5. The combination of a wagon-body provided with straps 2, forming spaces, an end-gate, wings provided at their curved edges
50 with openings, keepers arranged on the straps, spring-actuated bolts arranged in the keepers and adapted to engage the openings of the wings, the levers and the pivots connecting
55 the levers to the bolts and arranged near one side of the levers, whereby the levers are adapted to hold the bolts out of engagement with the wings, substantially as described.

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

CHARLES H. CHAIN.

Witnesses:

CHARLES E. RICE,
R. H. RICE.