

(No Model.)

G. C. FLAGG.  
WAGON END GATE.

No. 504,448.

Patented Sept. 5, 1893.

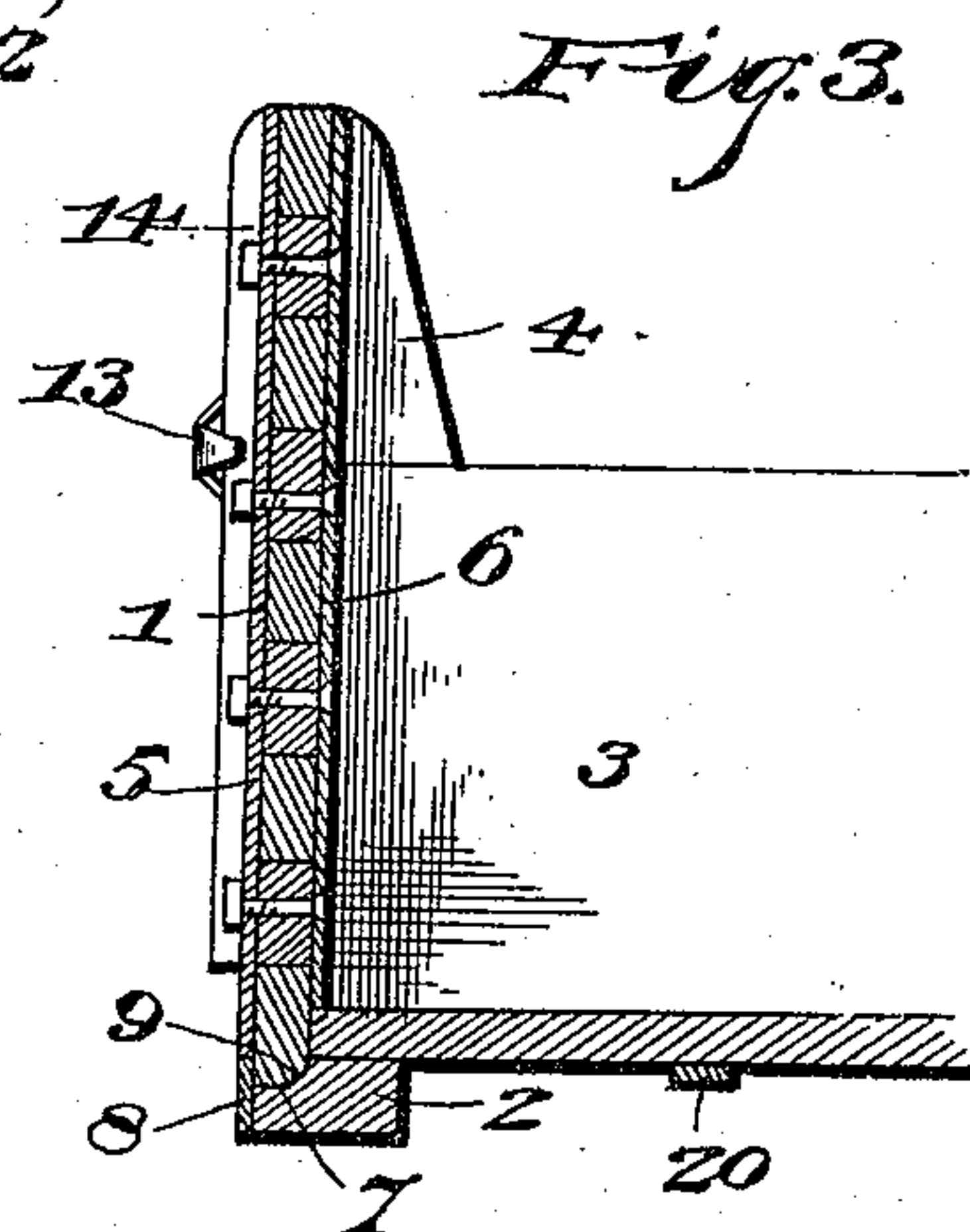
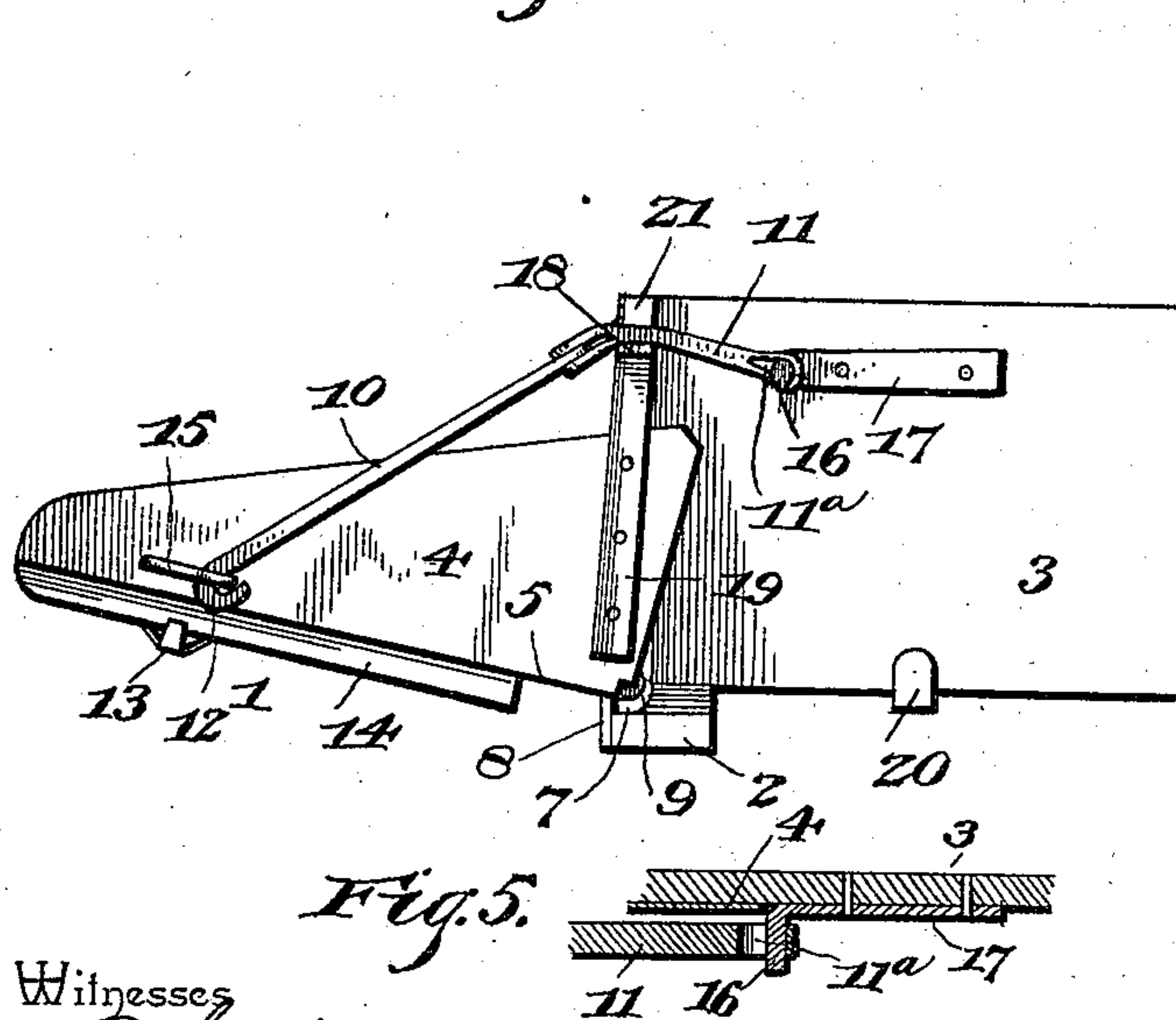
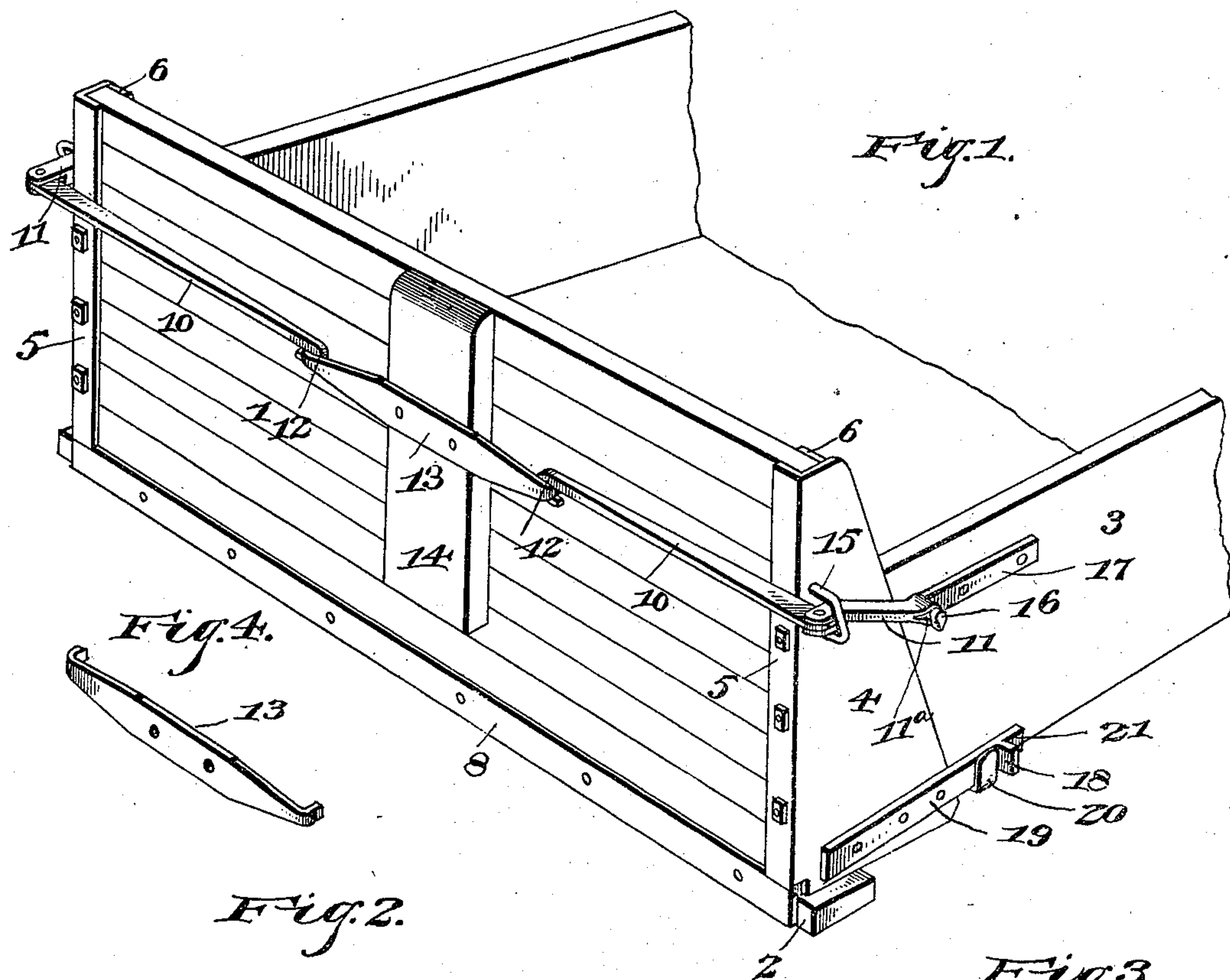


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE C. FLAGG, OF LEWISTOWN, ILLINOIS.

## WAGON END-GATE.

SPECIFICATION forming part of Letters Patent No. 504,448, dated September 5, 1893.

Application filed June 7, 1893. Serial No. 476,851. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE C. FLAGG, a citizen of the United States, residing at Lewistown, in the county of Fulton and State of Illinois, 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 improve the construction of that class of end gates which are adapted to be lowered to furnish shoveling boards, and to provide simple and effective means for locking the end gate in its raised and lowered positions.

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 hereunto appended.

In the drawings: Figure 1 is a perspective view of an end gate constructed in accordance with this invention, and shown raised. Fig. 2 is a side elevation of the same, the end gate being lowered to form a shoveling board. Fig. 3 is a detail sectional view of the lower portion of the end gate and the adjacent portion of the wagon body or box. Fig. 4 is a detail perspective view of the keeper. Fig. 5 is a detail sectional view, illustrating the manner of connecting the link bars to the wagon body.

Similar numerals of reference indicate corresponding parts in the several figures of the drawings.

1 designates an end gate, supported at its lower edge on a rear bottom cleat 2, of a wagon body or box 3, and having secured to it triangular sides or wings 4, to enable the end gate to form a shoveling board. The wings 4 are provided with securing flanges 5, and the end gate has its edges secured between the flanges 5, which are arranged on the outer face of the end board or gate, and metal strips or bars 6, located on the inner or upper face of the end gate, flat-headed bolts being employed as fastening devices and having their heads countersunk. The cleat 2 is provided at its outer edge, which projects beyond the wagon body or box, with a longitudinal recess 7, and has secured to its outer edge a metal strip 8, which forms a longitudinal groove in the rearward projecting portion of the bottom

cleat to receive the lower edge of the end gate, and the latter is rounded at 9 to enable it to readily turn in the groove of the cleat to form a hinge-joint.

The end gate is locked in a vertical position by levers 10, which are connected with the body by link-bars 11, and which are provided at their outer ends with hooks 12 to engage detachably the ends of a keeper 13, of the end gate. The keeper 13 of the end gate is disposed horizontally thereon and is secured to a cleat 14 and has its ends bent inward to form lugs to be engaged by the hooks of the locking-levers. The locking-levers are tapered throughout their lengths to enable them to be fulcrumed at their inner ends on the end gate at the securing flanges of the wings 4, whereby their outer ends set out from the end gate and may be readily sprung into and out of engagement with the lugs of the keeper 13. The inner ends of the locking-lever are hinged to the link-bars 11, and are connected with the end gate by eyes or staples 15, which are adapted, when the end gate is lowered to form a shoveling board, to be engaged by the hooks 12 of the operating levers to support the end gate in a lowered position. The link-bars are provided at their front ends with openings or eyes and are pivotally connected to the sides of the body by headed lugs 16, formed integral with plates 17, which are fastened to the sides of the body or box. The rear ends of the link-bars are slightly bent, and when the end gate is lowered they rest upon projecting hooks 18 of braces 19 which are secured to the lower ends of the wings and which are adapted, when the end gate is in a vertical position, to interlock with hooks 20 of the wagon body to fasten the lower end of the end gate more securely.

It will readily be seen that the end gate and means for fastening the same are simple and comparatively inexpensive in construction, that the end gate may be readily lowered from a vertical position to form a shoveling board, and that it is securely fastened in both positions.

The metal strip which is secured to the transverse cleat of the wagon body to form the longitudinal groove, has its upper edge located slightly below the bottom of the body, and the rounded lower edge of the end gate



turns freely in the groove to permit the end gate to be readily raised and lowered.

The end gate, which is constructed of boards arranged crosswise, has its lower edge rounded only at the inner side, the edge being angular at the outer side or face of the end gate; and the latter is securely and firmly held down in the groove of the body by the locking levers and link bars. The locking levers and link bars permit the end gate to be readily raised and lowered without their kinking or catching as the link bars have a vertically swinging movement, and the locking levers a horizontal swinging movement. The heads of the lugs 16 are vertically elongated and the eyes 11<sup>a</sup> of the link bars are elongated longitudinally of the link bars, whereby the link bars may when raised to a vertical position be disengaged from the lugs; but in use they will never assume this position, and are therefore securely attached to the wagon body. The braces 19 are provided with outwardly extending flanges to form the hooks 18, and have projecting ends 21 to prevent the link bars from slipping off the hooks when the end gate is lowered.

From the foregoing the construction, operation and advantages of the invention will be readily understood.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. The combination of a wagon body, an end gate provided on its outer face with a keeper having lugs at its ends, eyes arranged at the sides of the end gate, link-bars connected at their front ends with the body, and locking-levers arranged in the eyes and hinged to the rear ends of the link-bars and provided at their outer ends with hooks adapted to engage the keeper when the end gate is in a vertical position and to engage the eyes when the end gate is lowered, substantially as described.

2. The combination of a wagon body provided with headed lugs forming pivots, an end gate provided at its sides with eyes, a keeper secured to the outer face of the end gate and provided at its ends with lugs, link-bars pivoted at their front ends to the body by the lugs thereof and arranged in said eyes, and locking-levers hinged to the rear ends of the link-bars and provided at their other ends with hooks for engaging the keeper when the end gate is in a vertical position and for engaging the eyes when the end gate is lowered, substantially as described.

3. The combination of a wagon body, an end gate having eyes at its sides and provided on its rear face with a horizontal keeper having inwardly-extending lugs at the ends, link-bars having their front ends connected with the body and their rear ends arranged in said

eyes, and tapering locking-levers hinged to the rear ends of the link-bars and provided with hooks and adapted to be fulcrumed on the outer face of the end gate when the latter is in a vertical position and to engage the keeper, and to engage the eyes of the end gate when the latter is in a lowered position, substantially as described.

4. The combination of a wagon body provided at its rear end with a rearwardly-projecting transverse cleat having a longitudinal recess, a metal strip secured to the outer edge of the cleat and forming a groove, an end gate having its lower edge rounded and arranged in the groove and adapted to be lowered to form a shoveling board, and means for locking the end gate when in a vertical position and for supporting the same when lowered, substantially as described.

5. The combination of a wagon body provided at its sides with hooks, a transverse cleat secured to the rear end of the body and projecting rearwardly therefrom and provided with a longitudinal recess, a metal strip secured to the cleat at the recessed portion thereof and forming a groove, wings having braces and provided with projecting hooks adapted to interlock with those of the body, an end gate having a rounded edge arranged in said groove and having the wings secured to it, and means for locking the end gate in a vertical position and for supporting it when lowered, substantially as described.

6. The combination of a wagon body provided at its sides with hooks and having headed lugs, a transverse cleat secured to the wagon body and projecting rearwardly therefrom and provided with a longitudinal groove, an end gate arranged in the groove and provided with side wings and having laterally-projecting eyes, braces secured to the wings and having hooks adapted to interlock with those of the body, link-bars having their front ends pivoted to the body by the lugs thereof and having their rear ends bent at an angle and arranged in said eyes and adapted to be supported by the hooks of the end gate when the latter is lowered, a double keeper secured to the outer face of the end gate, and levers hinged to the rear ends of the link-bars and provided with hooks for engaging the keeper and the eyes of the end gate, substantially as described.

7. The combination of an end gate constructed of boards arranged crosswise, wings arranged at the sides of the end gate and provided with inwardly extending flanges arranged on the rear face of the end gate, metal strips arranged on the front face of the end gate at points opposite said flanges, and bolts passing through the flanges the end gate and the metal strips and securing the parts together, substantially as described.

8. The combination of a wagon body, an end gate provided on its outer face with a keeper and having eyes arranged at its sides,



link-bars connected at their front ends with the body and arranged in the eyes of the end gate, and the locking levers hinged to the rear ends of the link bars and extending horizontally on the rear face of the end gate when the latter is in a vertical position and engaging the keeper and forming a positive support for the end gate, said locking levers being adapted for engaging the eyes of the end gate when the latter is lowered, substantially as described.

9. The combination of a wagon body, an end gate, hooks arranged at the sides of the body at the bottom thereof, wings secured to the end gate and provided near their upper ends with eyes, a keeper arranged on the outer face of the end gate, link bars connected with the body, locking levers hingedly connected to the rear ends of the link bars and arranged in the eyes of the wings and adapted to engage the keeper, and braces secured to the wings at the bottoms thereof and projecting therefrom and provided with hooks to engage those of the body when the end gate is in a vertical position and to form a support for

the link bars when the end gate is lowered, substantially as described.

10. The combination of a body provided at the bottom of its sides with hooks, an end gate having wings provided with eyes, link bars connected to the body, locking levers hinged to the rear ends of the link bars and received by said eyes, a keeper arranged on the back or outer face of the end gate for engaging the locking levers, and braces secured to the wings at the bottoms thereof and projecting forward therefrom, and provided a short distance from their front ends with laterally extending flanges forming hooks for engaging those of the body when the end gate is in a vertical position, and for supporting the link bars when the end gate is lowered, substantially as described.

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

GEORGE C. FLAGG.

Witnesses:

GEO. WHITAKER,  
NATHAN PAINTER.