

(No Model.)

S. D. METCALFE.  
END GATE.

No. 602,138.

Patented Apr. 12, 1898.

FIG. 1.

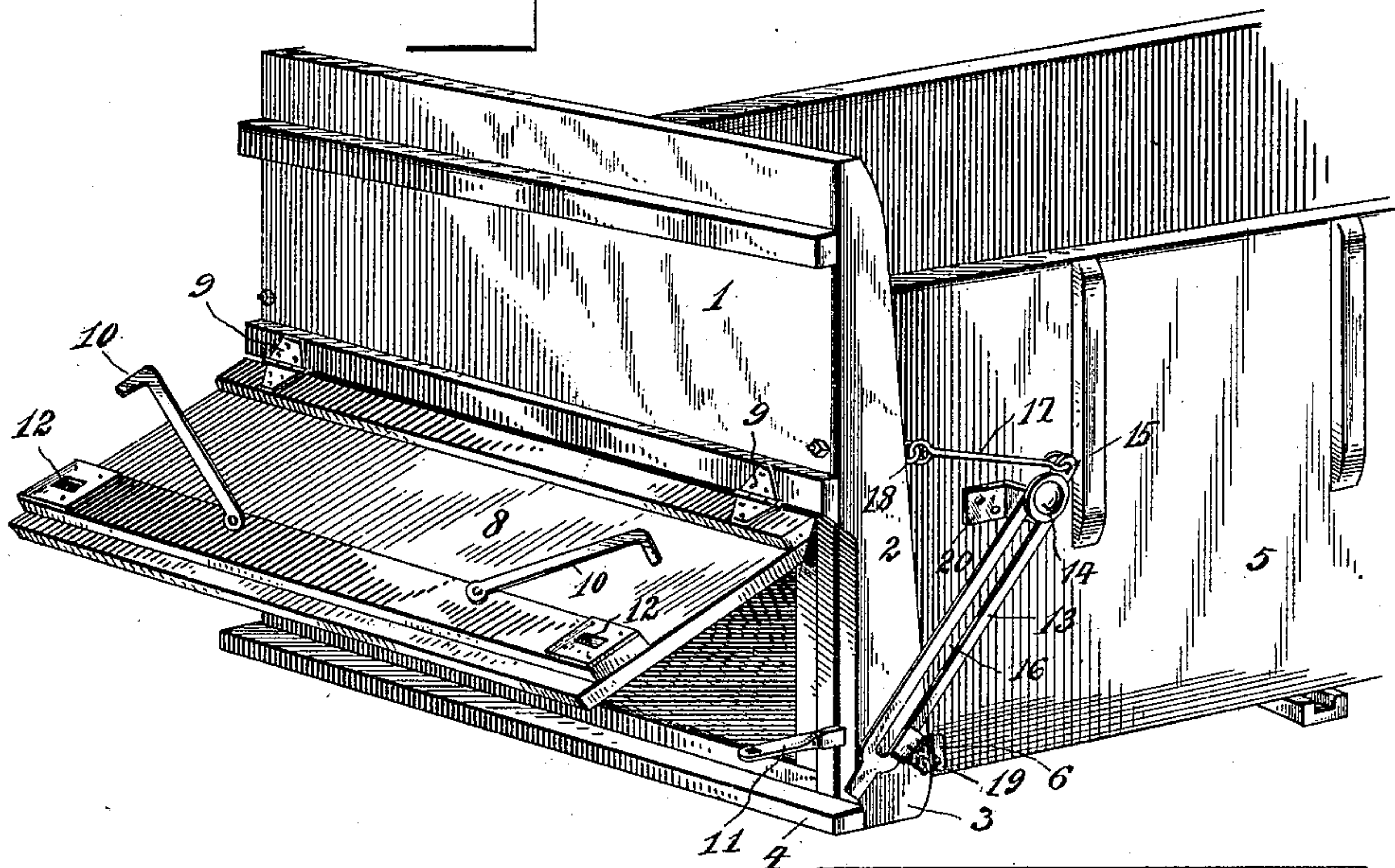


FIG. 2.

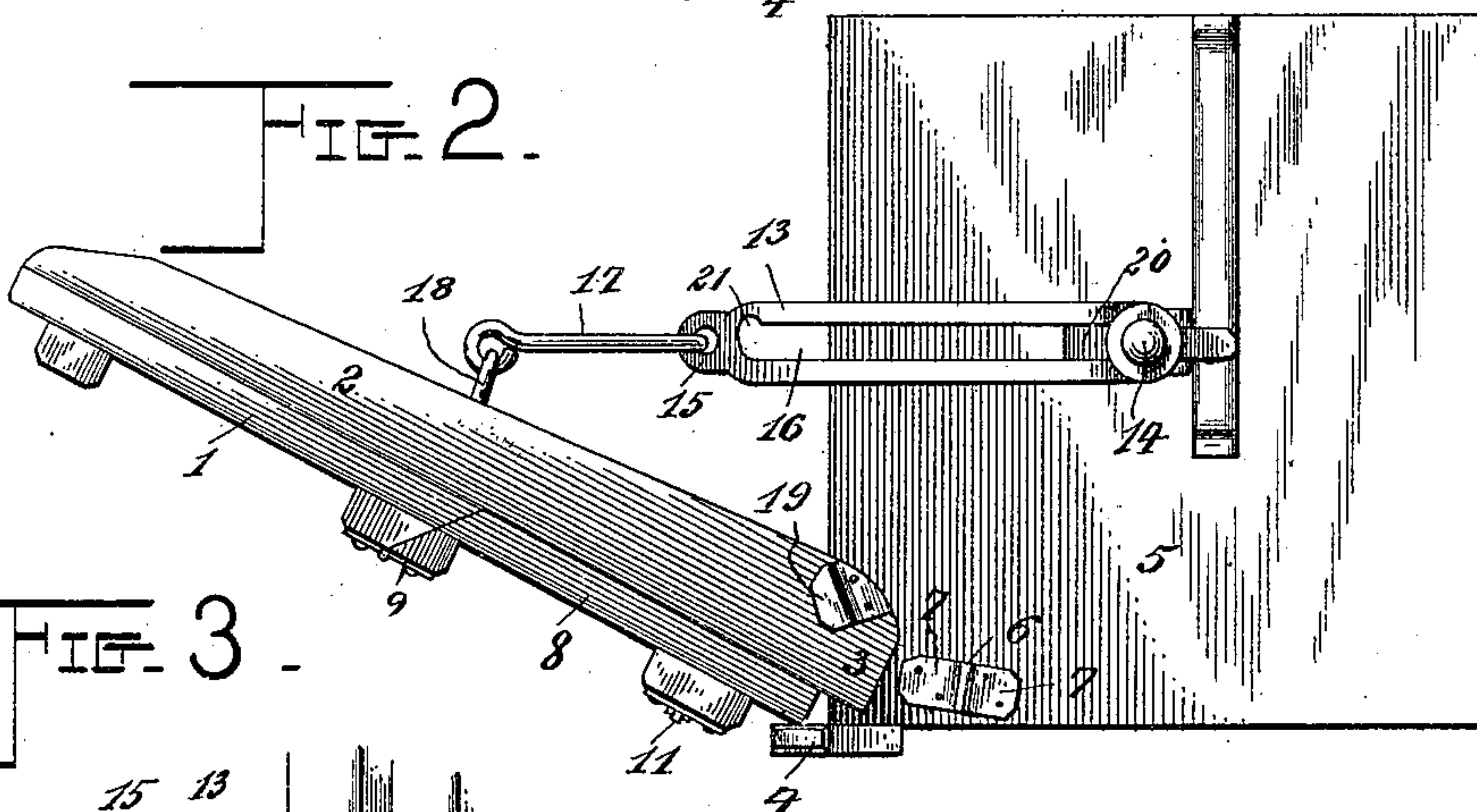


FIG. 3.

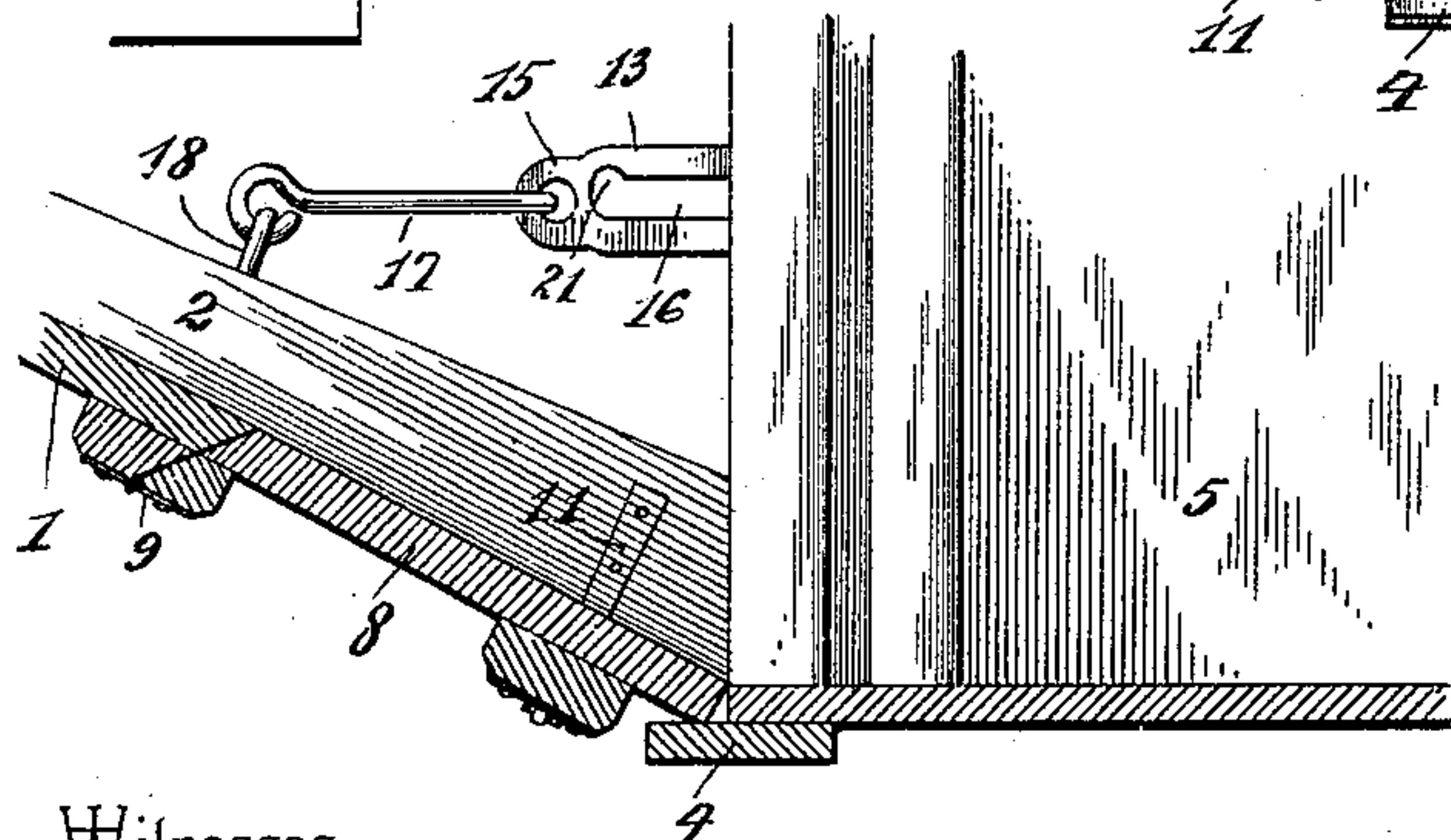
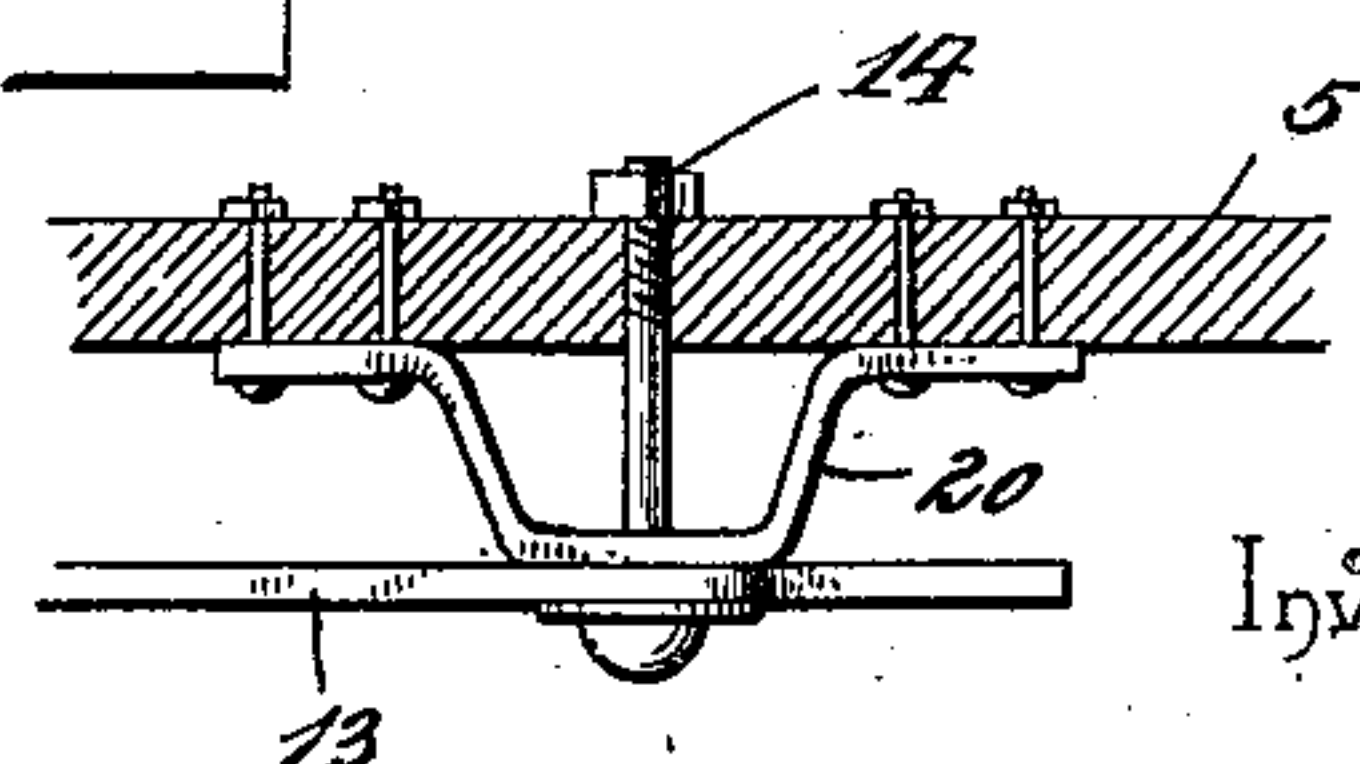


FIG. 4.



Witnesses

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By his Attorneys,

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# UNITED STATES PATENT OFFICE.

SANFORD D. METCALFE, OF BROCTON, ILLINOIS.

## END-GATE.

SPECIFICATION forming part of Letters Patent No. 602,138, dated April 12, 1898.

Application filed August 28, 1897. Serial No. 649,851. (No model.)

*To all whom it may concern:*

Be it known that I, SANFORD D. METCALFE, a citizen of the United States, residing at Brocton, in the county of Edgar 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.

10 The object of the present invention is to improve the construction of end-gates and to provide a simple, inexpensive, and efficient one adapted to be lowered to form a shoveling-board and capable of enabling a load of  
15 material to be dumped or discharged into an elevator or the like without necessitating the removal of the end-gate from the wagon-body.

A further object of the invention is to provide a simple, inexpensive, and efficient device for supporting the end-gate in its lowered position and for securely locking it when closed.

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

30 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, the end-gate being in a vertical position with its lower section open. Fig. 2 is a side elevation, the end-gate being lowered for shoveling. Fig. 3 is a detail sectional  
35 view illustrating the manner of supporting the end-gate upon the bottom of the wagon-body. Fig. 4 is a detail sectional view illustrating the construction of the brackets of the pivots.

40 Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates an end-gate having its sides or wings 2 extended at the bottom to provide projecting portions 3, which are interlocked with the ends of a bottom cleat 4 of a wagon-body 5. The bottom cleat 4 of the wagon-body projects rearward horizontally from the same to form a supporting ledge or seat for the lower edge of the end-gate, and the engagement of the projections 3 with the inner or front edges of the ends of the cleat 4 prevents the end-gate

from slipping off the supporting ledge or seat. The end-gate is also supported at the bottom of the body by stops 6, consisting of flanges 55 or plates 7, which are secured to the outer faces of the sides of the wagon-body, near the bottom thereof, and which are adapted to prevent the side pieces or wings 2 from slipping forward when a lower hinged section 8 60 of the end-gate is open.

The lower section 8 of the end-gate is connected at its upper edges to the upper portion of the end-gate by hinges 9, and it is adapted to open, as illustrated in Fig. 1 of the accompanying drawings, to permit a load to be discharged or dumped without necessitating the removal of the end-gate from the wagon-body. The hinged section is secured in its closed position by pivoted hooks 10, mounted on the 70 said lower section and adapted to engage perforations of shanks or bolts 11, which are mounted on the side pieces or wings of the end-gate and which extend through openings 12 of the hinged section. 75

The end-gate is locked in its closed position by means of a slotted lever 13, fulcrumed on a bolt or pivot 14 and having its slot extending nearly throughout its entire length. The upper end 15, which extends beyond the slot 80 16, is connected by a link 17 with the side piece or wing of the end-gate at a point midway between the ends thereof. The link 17 is provided at its ends with eyes or hooks which are linked into an eyebolt 18 of the end-gate 85 and a perforation of the end 15 of the lever. When the end-gate is closed, the lever is fulcrumed at the upper end of the slot on the pivot 14, and it forms a powerful means for drawing the end-gate tightly against the 90 wagon-body, and its lower portion is engaged with a stop or catch 19. The catch 19 consists of a plate secured to the outer face of the side piece or wing 2 at an inclination, as illustrated in Fig. 1, and its upper edge is deflected outward slightly to form a recess for the edge of the lever. When the end-gate is lowered to a position for shoveling, as illustrated in Fig. 2 of the accompanying drawings, the pivot or bolt is located at the opposite end of the slot, and the lever extends 100 rearward therefrom. The lever is supported away from the outer faces of the sides of the wagon-body by means of bracket-irons 20, se-



cured to the wagon-body and provided with perforations to receive the pivot-bolts. The brackets are provided with rectangular bends which form bearing-surfaces for the inner  
5 faces of the levers.

The slotted lever is prevented from moving longitudinally and slipping out of engagement with the stop or catch by a recess 21, located at the upper end of the slot of the lever,  
10 at the front side thereof, and receiving the fulcrum or pivot. The recess 21 forms a stop, and the lever, when in engagement with the catch, is firmly held against longitudinal movement.

15 The locking mechanism and the stop 6 serve to support the end-gate when the hinged section thereof is open and swung away from the bottom cleat 4.

The invention has the following advantages: The end-gate is simple and comparatively inexpensive in construction, and is adapted to be readily lowered to a position for shoveling, and its lower section is adapted to open for enabling a load to be discharged  
25 from a wagon without removing the end-gate therefrom. The locking device securely fastens the end-gate in its closed position and firmly supports it when it is lowered to form a shoveling-board.

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

What I claim is—

35 1. The combination of a wagon-body provided at its bottom with a transverse cleat projecting laterally from it, stops mounted on the body in advance of the projecting ends of the cleat, an end-gate having a hinged sec-

tion and provided with side pieces or wings 40 having their lower ends interposed between the projecting portions of the cleat and the stops, a lever provided with a longitudinal slot, a link connecting one end of the lever with the adjacent side of the end-gate, a pivot 45 mounted on the wagon-body and passing through the slot of the lever, and a catch or stop mounted on the end-gate and arranged to be engaged by the other end of the lever, substantially as described.

2. The combination of a wagon-body provided at its bottom with a transverse cleat projecting laterally from it, an end-gate having a lower hinged section and provided with side pieces or wings having their lower ends 55 arranged in advance of the ends of the cleat, the lower hinged section being supported directly upon said cleat, stops mounted on the wagon-body and located in advance of the lower ends of the side pieces or wings to prevent the end-gate from slipping forward when the lower hinged section is unfastened, a pivot mounted on the wagon-body, a slotted lever fulcrumed on the pivot, a link hinged to the end-gate and to one end of the lever, a catch 65 mounted on the end-gate and arranged to be engaged by the other end of the lever, and means for locking the lever against longitudinal movement when the end-gate is closed, 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.

SANFORD D. METCALFE.

Witnesses:

W. H. MCGEE,  
M. H. LAWLER.