No. 684,900. Patented Oct. 22, 1901.

C. A. ANDERSON.

END GATE.

(Application filed Jan. 31, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

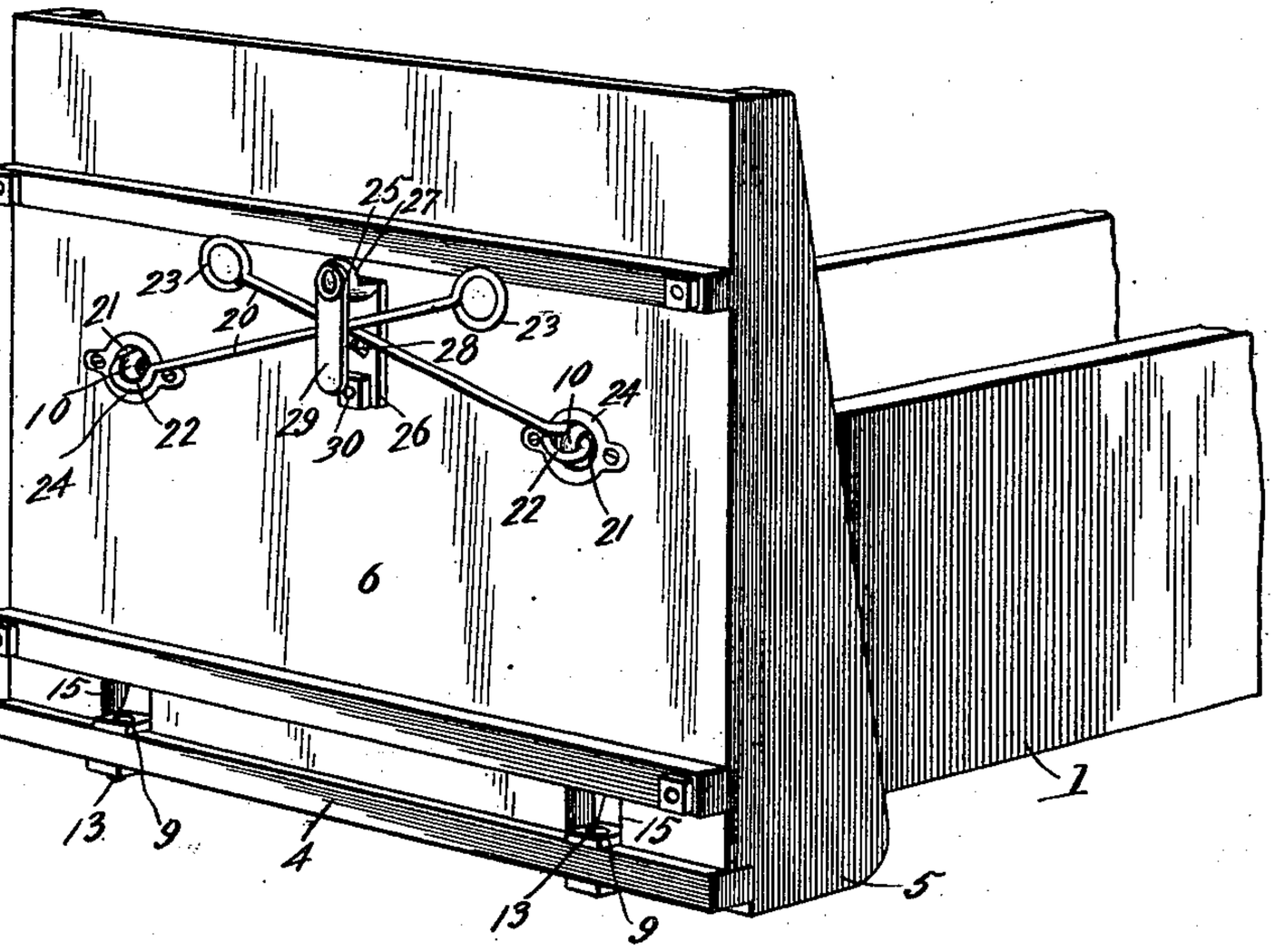

Fig. 2.

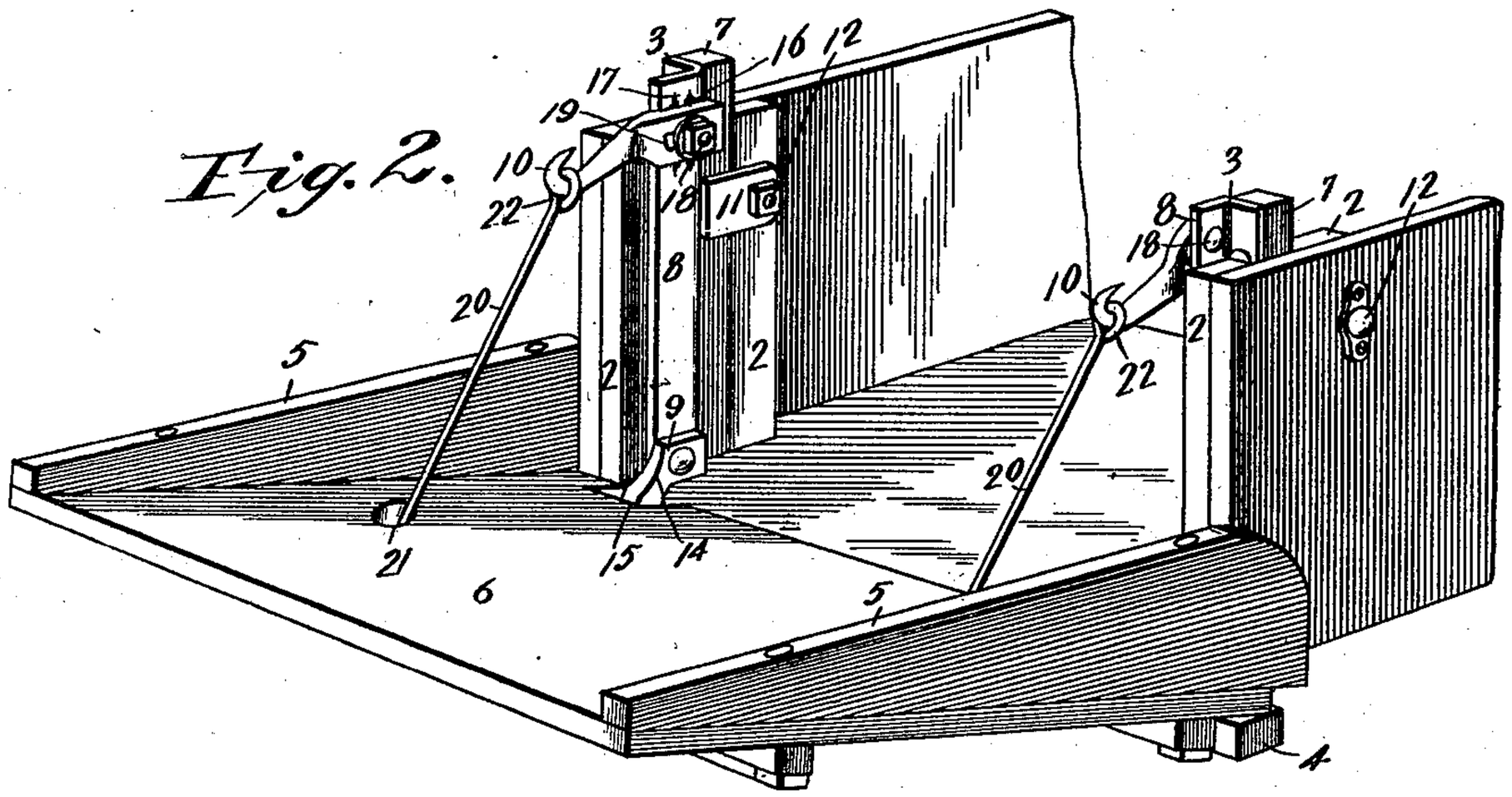

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Fig. 3.

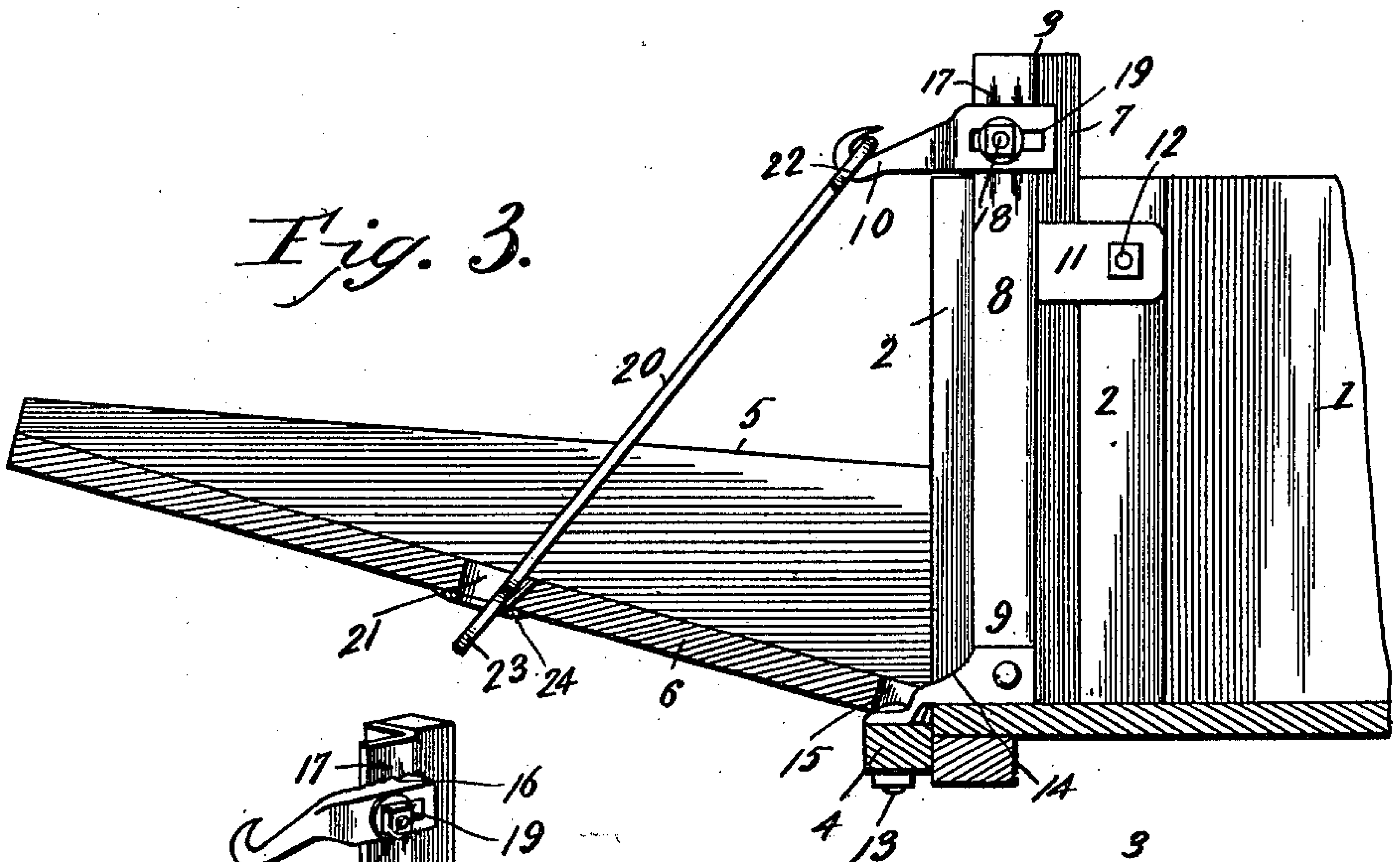


Fig. 4.

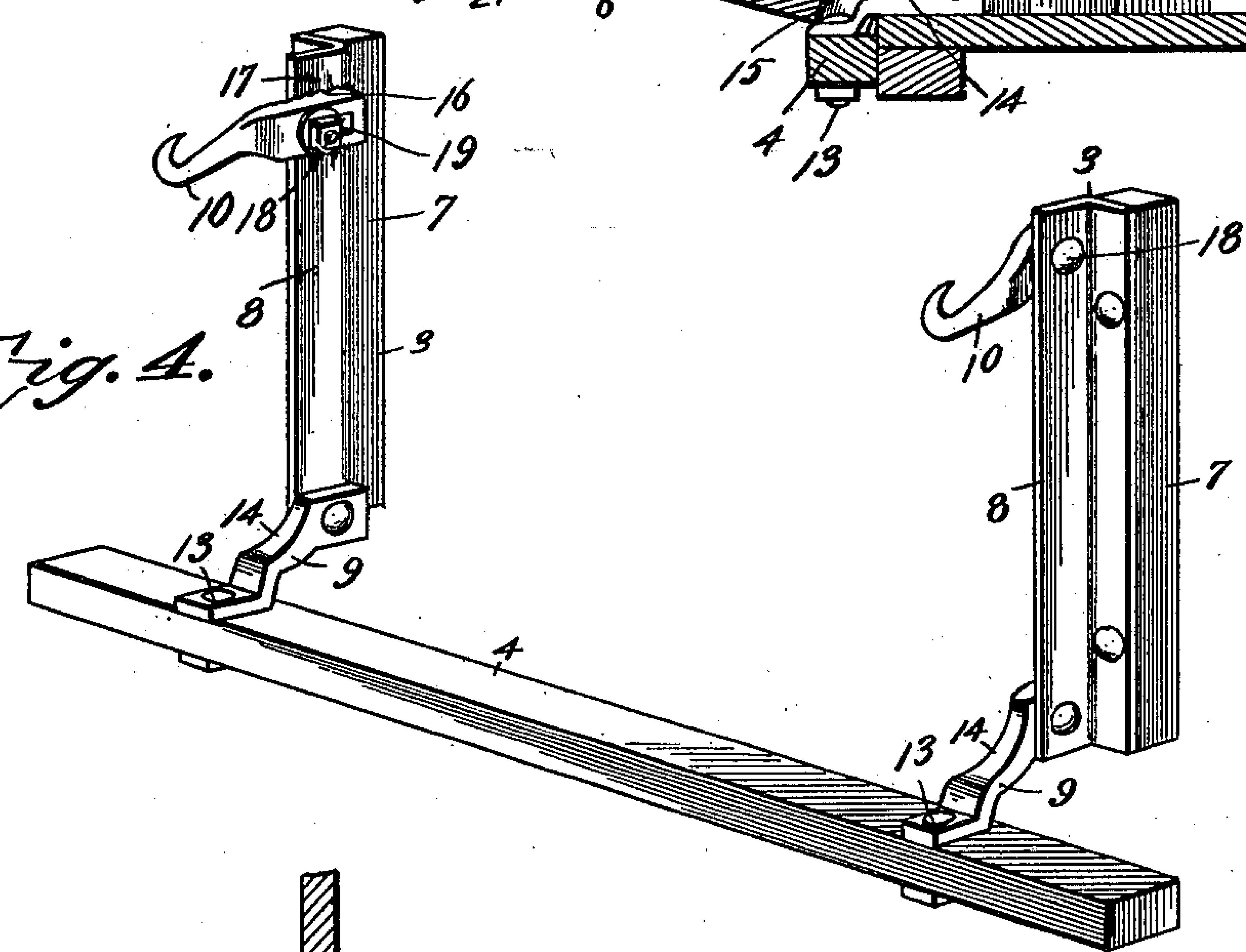


Fig. 5.

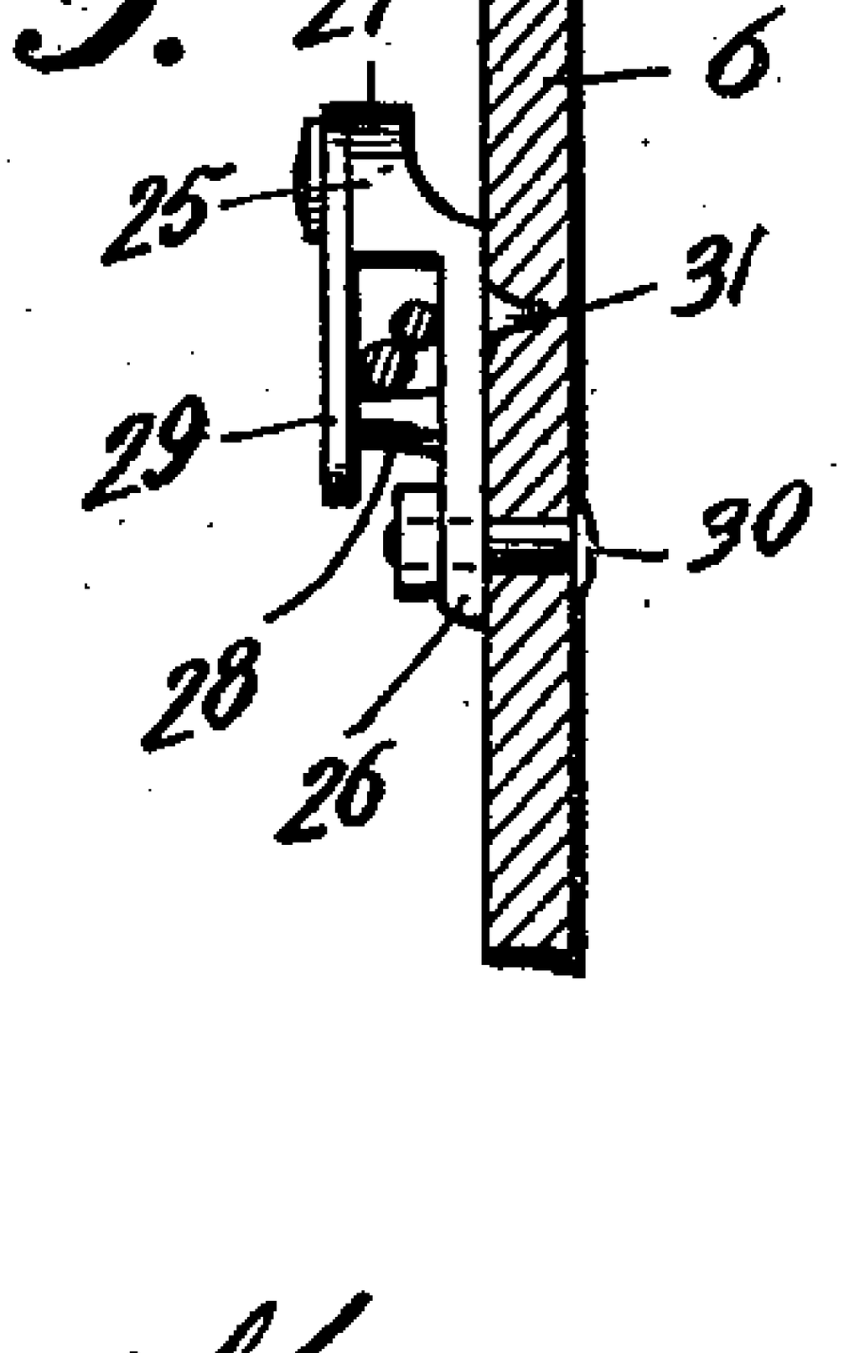
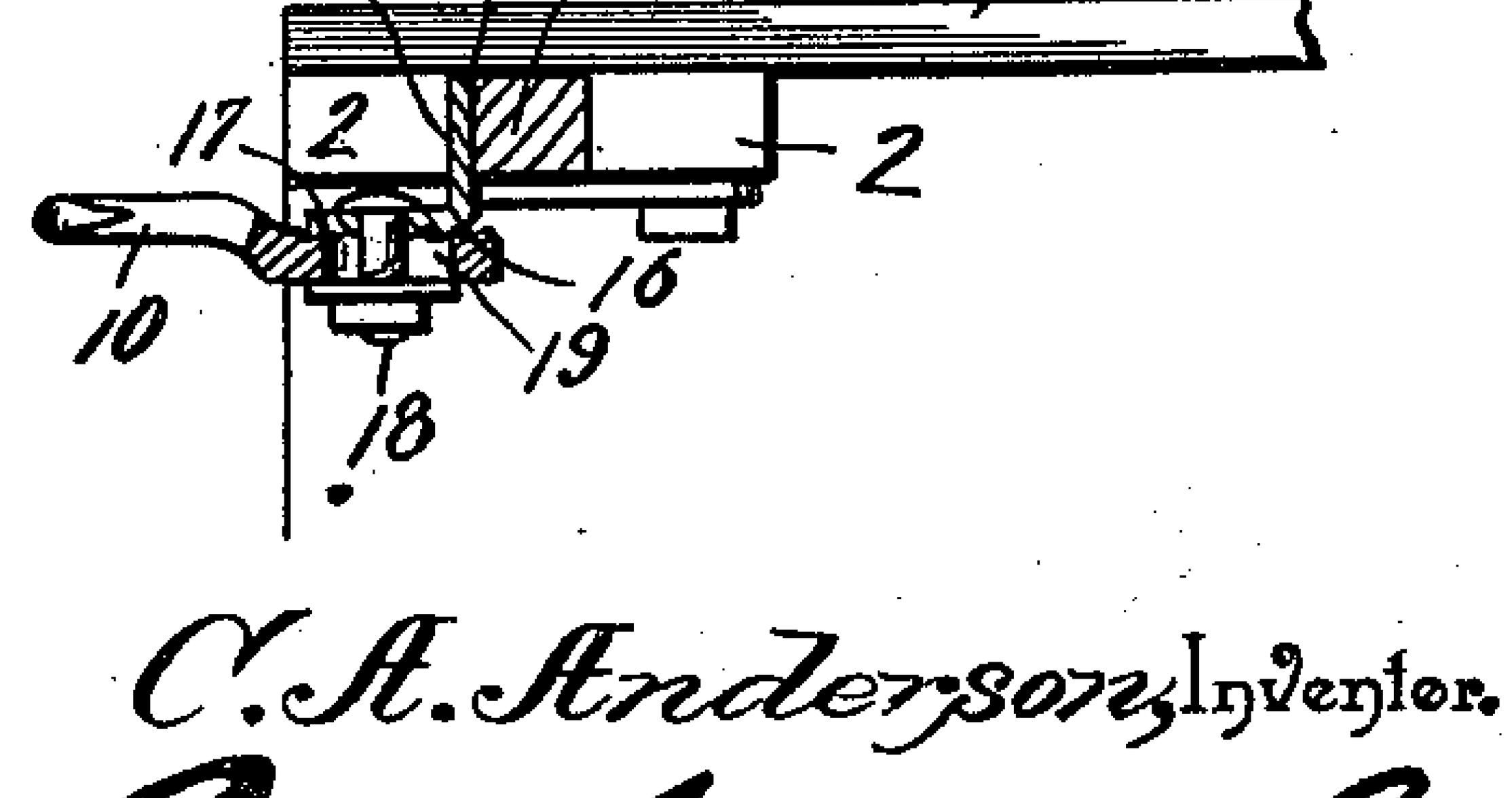


Fig. 6.



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UNITED STATES PATENT OFFICE.

CARL A. ANDERSON, OF ORION, ILLINOIS.

END-GATE.

SPECIFICATION forming part of Letters Patent No. 684,900, dated October 22, 1901.

Application filed January 31, 1901. Serial No. 45,478. (No model.)

To all whom it may concern:

Be it known that I, CARL A. ANDERSON, a citizen of the United States, residing at Orion, in the county of Henry 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 end-gates and to provide a simple, inexpensive, and efficient one adapted to be readily lowered to form a shoveling-board without necessitating the driver or other person leaving the wagon and capable of being readily applied to an ordinary wagon-body without necessitating any material alteration in the construction thereof and without interfering with the use of a top box.

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 a portion of a wagon-body provided with an end-gate constructed in accordance with this invention and shown closed. Fig. 2 is a similar view, the end-gate being arranged to form a shoveling-board. Fig. 3 is a longitudinal sectional view, the parts being arranged as shown in Fig. 2. Fig. 4 is a detail perspective view illustrating the construction of the hangers for supporting the transverse end cleat. Fig. 5 is a detail vertical sectional view of a portion of the end-gate, illustrating the construction of the catch for holding the links or rods for locking the end-gate in a vertical position. Fig. 6 is a detail horizontal sectional view of one side of the wagon-body, illustrating the manner of mounting the hooks for engaging the links.

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

1 designates a wagon-body of the ordinary construction, provided at opposite sides with vertical cleats 2, receiving removable hangers 3 for supporting a transverse bottom cleat or bar 4, projecting beyond the sides of the wagon-body and engaged by wings 5 of an end-gate 6, as clearly illustrated in Fig. 1 of the accompanying drawings, when the said end-gate is arranged in a vertical position. Each hanger preferably consists of a wooden bar or piece 7 and an angle-iron bar 8, having one of its flanges secured to the wooden bar 7, as clearly illustrated in Fig. 4 of the accompanying drawings, and the other flange forms a support for a lower foot 9 and an upper hook 10. The angle-iron and the wooden bar form a standard and are secured within the space between the adjacent vertical cleats 2 by means of a plate or washer 11, extending rearward or outward from the inner cleat 2 and secured to the same by means of a bolt 12, having a nut at its inner end, which is adapted to be loosened when it is desired to remove the standard from the space between the cleats 2. The bolt 12 extends entirely through the side of the wagon-body and has its head arranged at the outer face of the same, a suitable plate being preferably interposed between the head of the bolt and the outer face of the side of the wagon-body, as clearly shown in Fig. 2.

The foot 9, which is suitably secured to the lower end of the outwardly-extending flange of the standard, extends rearward and downward therefrom and is provided with an outer portion arranged below the inner portion and having a perforation for the reception of a bolt 13 or other suitable fastening device for securing the transverse bar or cleat to the foot. The said foot is provided with an inclined intermediate portion 14, forming a lower recess and extending outward beyond the bottom of the wagon-body to provide a slight space to allow for bottoms of different lengths, and the said bar 4 may be bolted at different points, as will be readily apparent. The hangers and the horizontal transverse bar may be readily applied to the ordinary wagon-body, and the only change necessary is to provide perforations for the bolts 12. The wings 5, which extend below the lower edge of the end-gate, form recesses to receive the ends of the transverse bar or cleat 4 when the end-gate is in a vertical position, as shown in Fig. 1, and the bottom of the end-gate is also provided with intermediate recesses 15 to receive the outer portions of the downwardly-extending feet of the hangers.

The hooks which extend from the upper por-

tions of the flanges of the standards of the hangers are provided with slotted shanks which have corrugated inner engaging faces 16, which fit against corresponding corrugated portions 17 of the said flanges. The corrugated portions of the hooks and the flanges are held firmly in engagement with each other by means of bolts 18, which pass through the flanges and which are arranged in the longitudinal slots 19 of the shanks of the hooks. By this construction the hooks are adjustable and are adapted to be moved inward and outward for enabling the end-gate to be properly secured by a pair of links or rods 20.

The links or rods 20, which are located adjacent to the inner faces of the sides of the wagon-body when the end-gate is lowered to form a shoveling-board, extend through openings 21 of the end-gate and are provided with inner and outer eyes 22 and 23. The inner eyes, which are smaller than the outer eyes 23, are of a size to pass readily through the openings 21 of the end-gate and are engaged with the hooks 10. The outer eyes, which are larger than the inner or upper eyes, are larger than the openings 21 and are adapted to form stops for limiting the downward movement of the end-gate to support the latter in position for forming a shoveling-board. The links or rods are adapted to be swung laterally to arrange them in the position shown in Fig. 1 without liability of the same becoming disengaged from the hooks, and the outer or larger eyes are arranged in planes at right angles to the planes of the inner or smaller eyes in order to lie flat against the outer face of the end-gate when the latter is in a vertical position. The end-gate is preferably provided at its outer face with plates 24, having openings and arranged around the openings 21 of the end-gate. Both eyes of the links or rods are closed, so that the links or rods cannot by longitudinal movement become disengaged from the hooks when they are crossed and arranged as shown in Fig. 1, as would be the case were the links or rods provided with open eyes or hooks. Also the bills of the hooks are arranged within the openings of the end-gate when the latter is in a vertical position, as shown in Fig. 1, so that it is impossible to disengage the rods from the hooks when the end-gate is in such position.

The rods are secured in the crossed position (illustrated in Fig. 1 of the drawings) by means of a catch 25, consisting of a frame or plate 26, secured to the outer face of the end-gate and provided at one end with a lug 27 and having a projection or stud 28, which is adapted to coöperate with a pivoted plate or arm 29 to confine the links or arms. The lug 27 is arranged at the top of the plate or frame, and the arm 29 is pivoted at its upper end to the lug and is held in its closed position by gravity. The rods after being crossed are arranged in the space between the projection 28 and the lug 29, and they are confined in this space or recess by the pivoted arm, which extends beyond the projection. When it is desired to swing the end-gate downward, the pivoted arm is raised and the rods are readily swung out of the recess of the catch, and this operation may be performed without the driver or other person leaving the vehicle. The catch is also adapted to hold the rods on the back of the end-gate when the latter is detached, and the said end-gate may, if desired, be arranged on the top of the wagon-body when it is desired to dump the contents. The end-gate does not interfere with the use of a top box, and it may be readily removed from the wagon-body, together with the hangers, when desired.

The catch, which may be secured to the end-gate in any suitable manner, is preferably perforated at its lower end for the reception of a bolt 30, and it is provided at its upper portion with a spur 31, which is embedded in the end-gate and which assists the bolt in holding the catch firmly in a vertical position.

It will be seen that the end-gate is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that it is readily operated to fasten and unfasten it and to arrange it to form a shoveling-board. It will also be apparent that the rods form convenient means for supporting and fastening the end-gate and that the closed eyes cannot become disengaged from the hooks when the links or rods are swung laterally to lock the end-gate in a vertical position.

What I claim is—

1. The combination with a wagon-body, of hangers detachably interlocked with the sides of the wagon-body and provided at their bottoms with rearwardly-extending feet projecting beyond the wagon-body, a transverse bar or cleat supported by the said feet, an end-gate interlocked with the transverse bar or cleat, and means for connecting the end-gate with the upper portion of the hangers, substantially as described.

2. The combination with a wagon-body, of hangers detachably interlocked with the sides of the wagon-body and provided at the bottom of the body with rearwardly-extending feet, a transverse bar supported by the feet, an end-gate interlocked with and supported by the bar, and means for securing the end-gate in its closed position, and for supporting the end-gate in an inclined position, substantially as described.

3. The combination with a wagon-body, of hangers secured to the sides of the wagon-body and provided with upper hooks and having lower rearwardly-projecting feet extending beyond the wagon-body, a bar disposed transversely of the body and supported by the feet, an end-gate interlocked with and supported by the bar, and rods connected with the hooks and with the end-gate, substantially as and for the purpose described.

4. The combination with a wagon-body, of hangers secured to the wagon-body at the

sides thereof and composed of standards, feet extending rearward from the standards, hooks arranged at the top of the standards, and means for adjustably securing the hooks to the standards, a transverse bar supported by the feet, an end-gate interlocked with and supported by the bar, and rods connected with the end-gate and with the hooks, substantially as described.

5. The combination with a wagon-body, and an end-gate, having openings, of rods hinged to the wagon-body and extending through the openings and provided at their outer ends with means for engaging the end-gate, and a catch consisting of a plate having a lug and provided with a stud, said lug and stud being spaced apart to form a recess to receive the rods, and a gravity-arm pivoted to the lug above the recess and arranged to close the same, 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.

CARL A. ANDERSON.

Witnesses:
ED F. DUFFIELD,
C. P. LAWSON.