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Patented Dec. 20, 1898.

J. CHANEY.
GATE.

(Application filed Mar. 28, 1898.)

(No Model.)

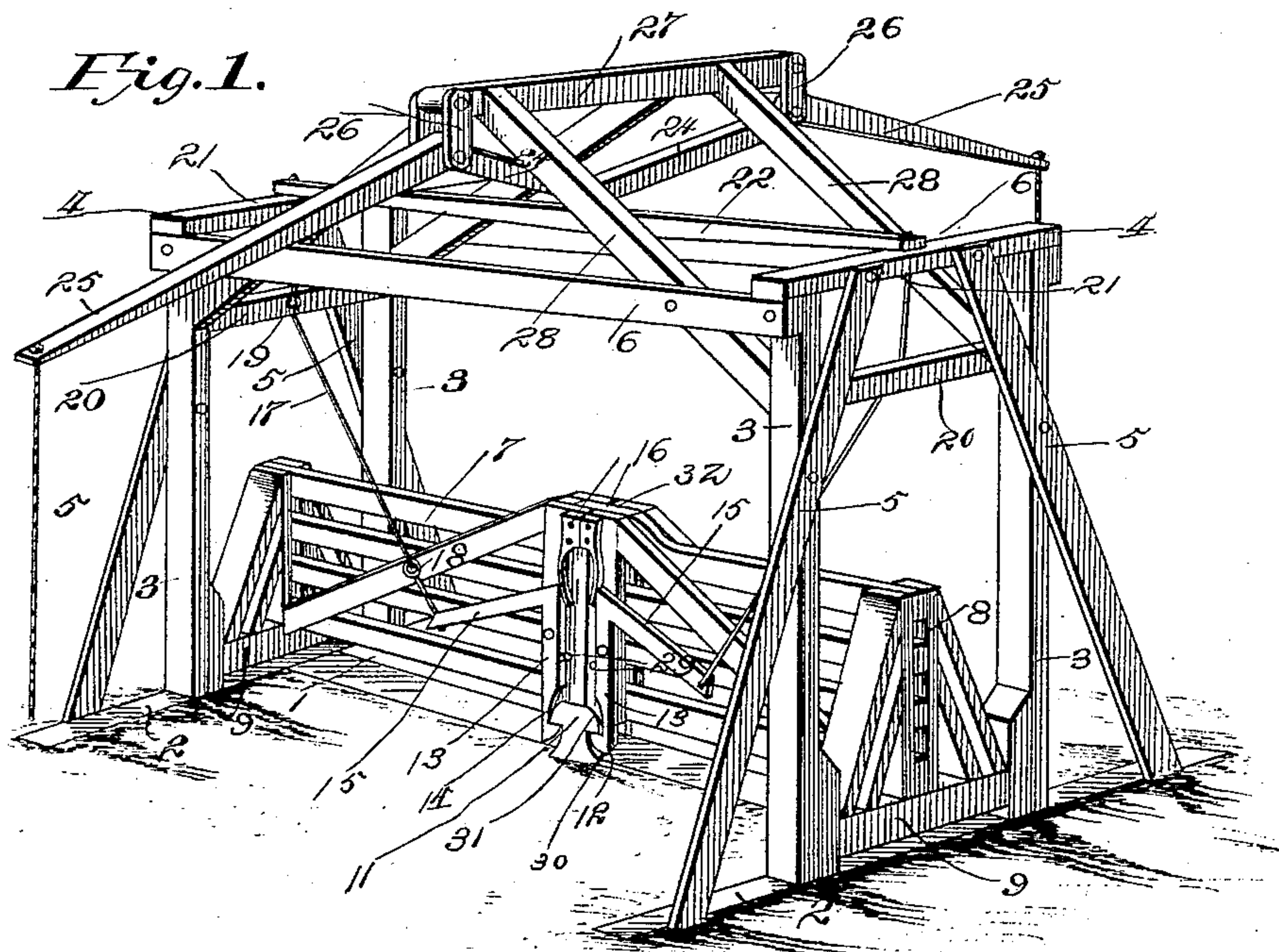


Fig. 2.

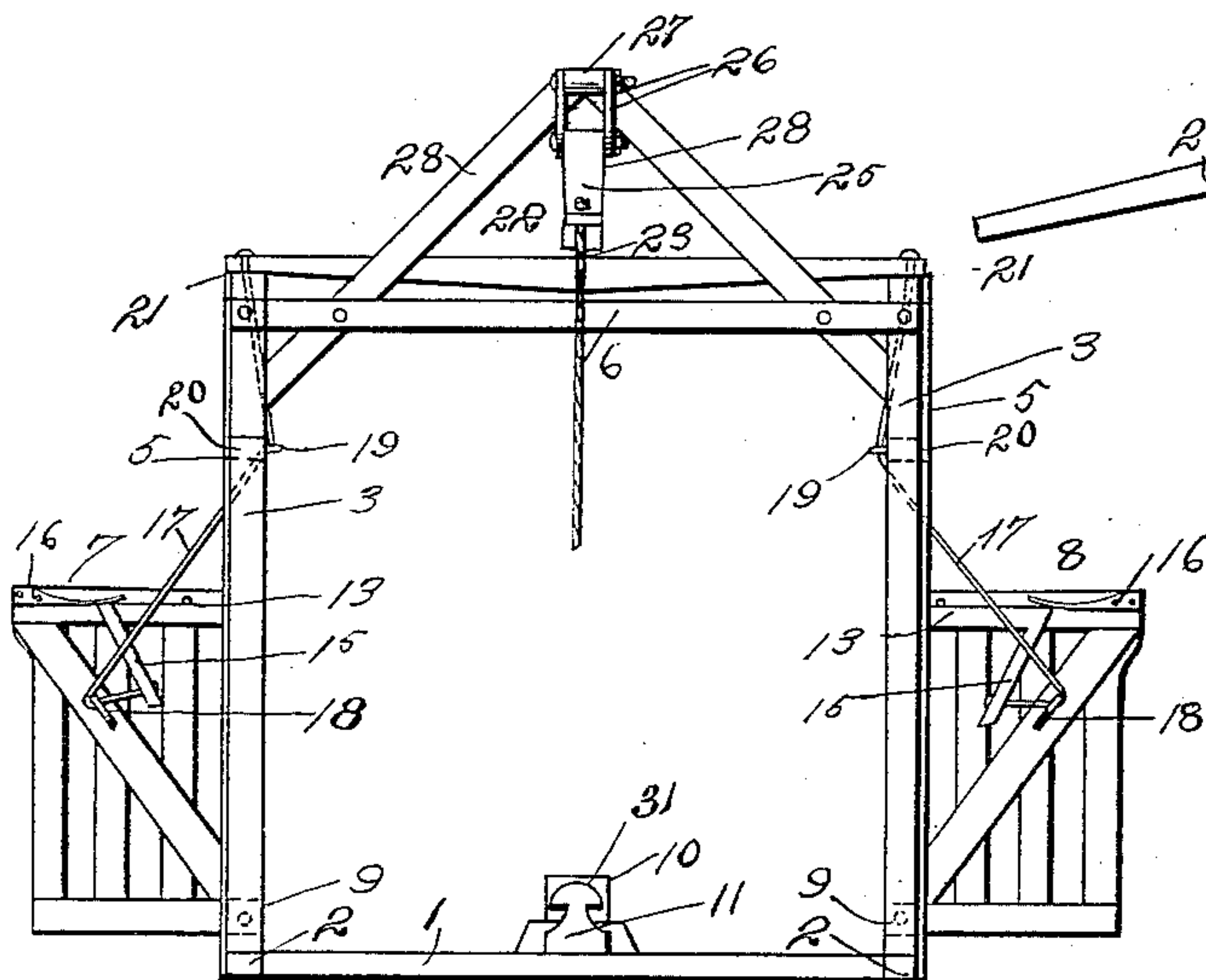
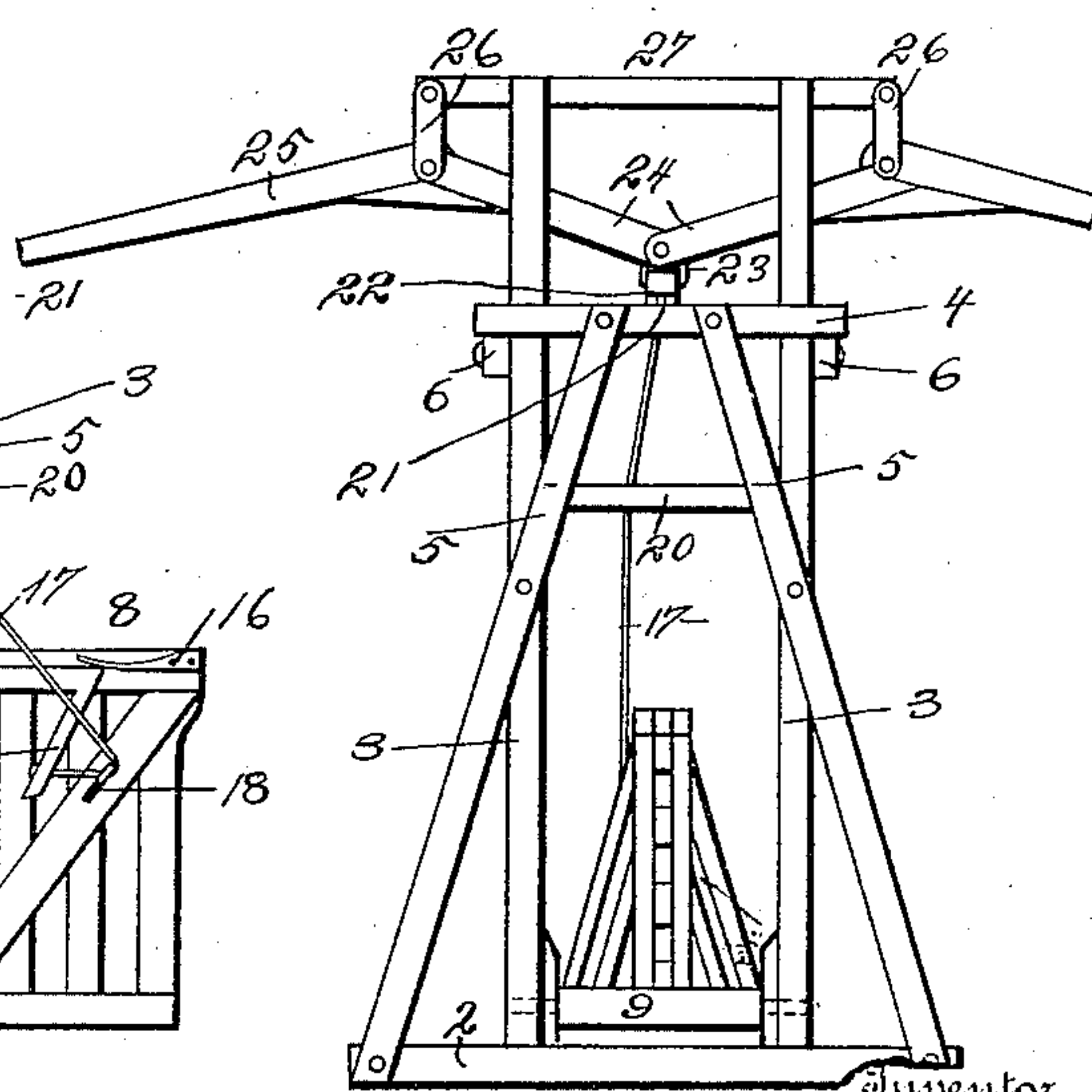


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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GATE.

SPECIFICATION forming part of Letters Patent No. 616,404, dated December 20, 1898.

Application filed March 28, 1898. Serial No. 675,482. (No model.)

To all whom it may concern:

Be it known that I, JAMES CHANEY, a citizen of the United States, residing at Lebanon, in the county of Laclede and State of Missouri, have invented certain new and useful Improvements in Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in gates; and it consists of a framework made up of a pair of main uprights on opposite sides of the roadway, cross-beams connecting the upper ends of said uprights, the latter being mounted upon suitable base-pieces and having braces connected therewith, a pair of gates being mounted between the said uprights and adapted to be swung on their lower outer angles through the medium of transverse pivoted bars having bearing at their opposite ends in the adjacent uprights and provided with cords or pulls connected to the center thereof, leading upwardly in an angular direction and attached to opposite ends of an upper cross-lever movably secured at its center to the inner opposing ends of the short arms of two levers fulcrumed in links depending from a beam located above the cross-beams, the outer ends of said latter levers being provided with operating-cords, by means of which they may be depressed.

The invention also consists of the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

The object of the invention is to construct a simple form of gate of the class set forth adapted to be operated by a person in a sitting posture in a vehicle either to open the gate on approaching the same or to close it after passing through and leaving the location thereof.

In the accompanying drawings, Figure 1 is a perspective view of the improved device, the gates being shown in closed position. Fig. 2 is a front elevation of the same, showing the gates open. Fig. 3 is an end view.

Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in the several views, the numeral 1 designates a lower cross-sill, to the opposite ends of which are secured cross-beams 2 2, having main uprights 3 3 rising

therefrom and arranged in pairs on opposite sides of the roadway and connected at the top by shorter cross-beams 4 4 and each pair tied by oppositely-positioned tie-beams 5 5. The said framework is suitably braced and supported by brace-bars 6 6, arranged in pairs at opposite ends of the device, and in the opposite uprights 3 3 gates 7 and 8 are pivoted, each having a transverse bar 9, bearing at its opposite ends in the adjacent inner portions of the said uprights.

Rising from one side of the central portion of the lower sill 1 is a stop 10 for preventing movement of the gates over the sill, and directly opposite the said stops is a vertically-disposed striker-plate 11, having shouldered notches 12 formed in the opposite edges thereof. On one side of the inside stile of each of the gates 7 and 8 is pivotally mounted an elbow latch-bar 13, pivotally supported at a point below its elbow and having a lower engaging shoulder 14 on the inner edge thereof to catch in the shouldered notch 12 of the striker-plate 11, and thereby hold the gate closed under ordinary conditions. The said latch-bar in each instance is pivoted intermediate of its ends, and the upper end has an operating-arm 15 secured thereto, which extends outwardly and downwardly at an angle of inclination. On the same side of the said stiles spring-arms 16 are secured, each of which comprises an upper securing-head and a depending reduced spring-finger which bears against the upper inner portion of each latch-bar 13 and tends to throw the lower end of said latch-bar into the striker-plate 11. The spring-fingers of each of the spring-arms depend vertically, and the operating-arms 15 of the two latch-bars of course extend in opposite directions. The latch-bars 13 are limited as to their inward movement when engaging the opposite notches of the striker-plate 11 by pins 29, projecting outwardly from the adjacent stiles of the gates, and thereby is prevented the fracturing of the lower engaging end of either latch-bar when closing against the striker-plate with a sudden jerk incident to the inner movement or gravitation of each gate. To facilitate the engagement of the said latch-bars with the striker-plate, they have inner rounded noses 30, and the upper opposite corners of said striker-plate are in like manner rounded, as at 31, to insure an easy riding movement of the said lower

ends of the latch-bars over the upper opposite portions of the striker-plate. To the outer ends of arms 15 operating-cords 17 are connected and pass up through adjacent guide-eyes 18, carried by adjacent parts of the gates, and thence upwardly through other guide-eyes 19, secured in intermediate horizontal cross-beams 20 of the uprights 3. The said cords 17 then extend to guide-openings 21 in the central portion of the upper cross-beams on the uprights 3 and are connected to the opposite ends of an upper cross-bar 22, movably attached by a suitable connecting-loop 23 to the inner opposite ends of the angular arms 24, forming part of outwardly-projecting operating-levers 25, the said levers being fulcrumed in oppositely-positioned pairs of links 26. The said links are pivotally attached to the opposite ends of an upper ridge-beam 27, having diagonal braces 28 extending therefrom and downwardly to the inner opposite portions of the uprights 3. At the points where the transverse pivot-bars at the lower outer portions of the gates engage the uprights 3 the latter will be suitably reinforced by the application thereto of either space-blocks or analogous devices. The upper part of the gate may also have applied thereto a suitable shed or covering, if so desired, extending from the ridge-beam 27 outwardly over the braces 28, means being provided for permitting the cross-lever 22 to have free operation. The angular arms 24 of the operating-levers 25 are pivotally connected by a bolt, and the loop 23 is suspended from the said bolt, and, furthermore, all the parts will be so formed and connected that they may be easily set up or taken apart for any purpose desired.

In operation the cord depending from the operating-lever 25 on either side of the gate is grasped and the said operating-lever pulled downwardly, thereby elevating the cross-bar 22 and drawing upward the cords 17, which simultaneously pull on the angular arms 15 of the latch-bars 13 and disengage the latter from the striker-plate 11 and simultaneously throw or tilt the said gates outward to the position shown in Fig. 2. The several parts are so connected and adjusted that when the gates are thrown up through the tension exerted thereon by the cords 17 they are elevated until the dead-center or center of gravity is reached, and the momentum obtained will carry said gates beyond said center of gravity. After the vehicle or person has passed through the gates the cord depending from the opposite operating-lever 25 is drawn down and the cross-bar 22 similarly raised to elevate both of the gates 7 and 8 in a direction opposite to that heretofore described and throw them back in a closed position. When the gates fall over upon the sill, the latch-bars again engage the striker-plate and the said gates are held closed until a subsequent similar operation.

To prevent the upper central portions of the gates from moving laterally, a tongue 32

extends from one and enters a slot in the other, the said tongue being so formed as not to interfere with the tight fitting of the gates when closed and entering the said slot in a regular and desired manner.

The device is very simple in construction, convenient in operation, and can be constructed at a cost not exceeding that necessary in making the gates now so commonly used. The operating-levers 25 can be lengthened or shortened, and, if desired, the operating-cords attached thereto can be carried to any distance from the gate.

It is obviously apparent that changes in the dimensions, proportions, and minor details of construction and arrangement of the several parts might be made without in the least departing from the nature or spirit of the invention or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed as new is—

1. In a gate, the combination with a stationary frame, of a pair of gates pivoted in uprights at their lower outer corners, elbow latch-bars on said gates, a ridge-beam, links pivoted to the opposite ends thereof, operating-levers fulcrumed in said links and pivotally connected at their inner ends, a vertically-movable cross-bar suspended from the inner ends of said operating-levers, and cords extending from the ends of said bar through guides to the latch-bars, substantially as described.

2. In a gate, the combination with a stationary frame, of a pair of gates pivoted in uprights at their lower corners, a pair of operating-levers fulcrumed in the said framework, a vertically-movable cross-bar suspended from the inner ends of the said operating-levers, and cords attached at one end to the ends of the said cross-bar and at the opposite end to the gates, substantially as described.

3. In a gate, the combination with a stationary frame, of gates pivoted in uprights at their outer lower corners, an elbow latch-bar on each gate pivoted at a point remote from its elbow and having an outwardly-extending downwardly-inclined arm, a keeper having opposite notches to engage the opposite latch-bars, spring-arms bearing against the elbows of the latches for holding the latter in engagement, a pair of operating-levers extending outwardly from opposite sides of the gate and having their inner ends pivotally connected, a vertically-movable cross-bar suspended at its center from the connected ends of the said levers, and cords connecting the ends of said cross-bar to the arms of the latch-bars, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES CHANEY.

Witnesses:

R. A. HOLT,
G. W. HOLT.