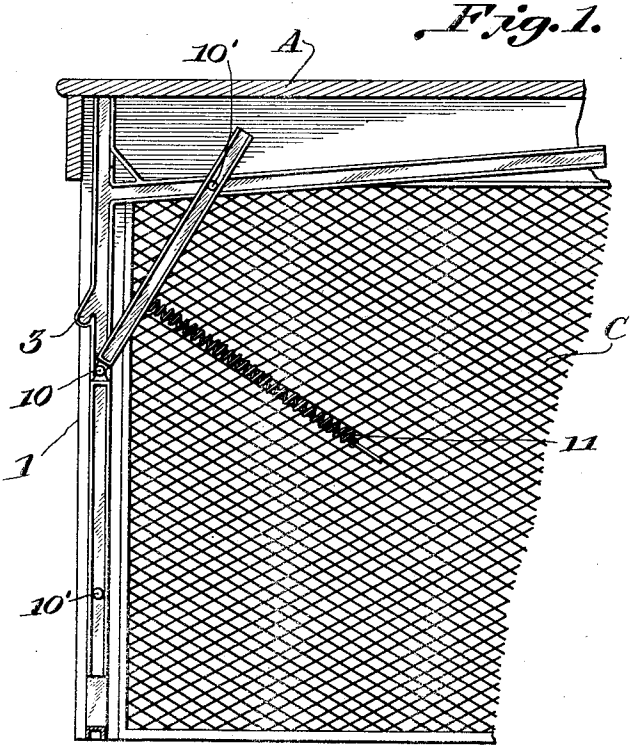
March 17, 1925. 1,530,428

C. W. SINES

VEHICLE GATE

Filed July 29, 1924

Fig. 1.



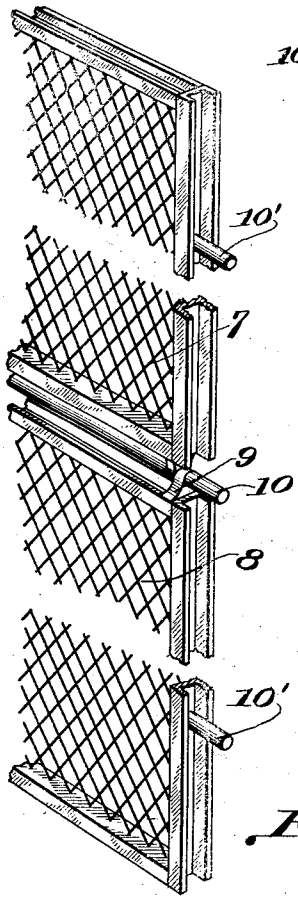
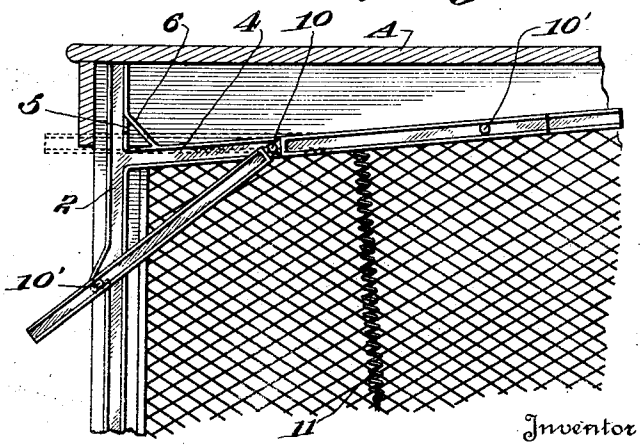


Fig. 3.

Fig. 2.



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Patented Mar. 17, 1925. 1,530,428

UNITED STATES PATENT OFFICE.

CHARLES W. SINES, OF TUCSON, ARIZONA.

VEHICLE GATE.

Application filed July 29, 1924. Serial No. 728,936.

To all whom it may concern:

Be it known that I, CHARLES W. SINES, a citizen of the United States of America, residing at Tucson, in the county of Pima and State of Arizona, have invented certain new and useful Improvements in Vehicle Gates; and I do hereby declare that the following is a full, clear, concise, 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 end gates for vehicles of the covered type having for an object to provide improvements in a gate or closure of that general type described and claimed in the United States patent issued to Alvin D. Daly, numbered 1,427,195, wherein such improved gate is so constructed as to require materially less space within the vehicle body for its operation, that is, movement of the same to open or closed positions with respect to the open rear end of the vehicle body cover, hence, affording greater interior space or area for the vehicle body with the consequent advantages of greater loading capacity.

It is likewise an object of the invention to provide a gate of the character mentioned having means upon the channeled guide strips therefor, whereby to permit the lower gate section to be optionally secured in either of several positions with opening of the same, thereby rendering it possible for persons of different physique to effectually operate the same.

Other objects of the invention will be in part obvious, and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by persons skilled in the art, I have in the accompanying illustrative drawings, and in the detailed following description based thereupon, set out one possible embodiment of the same.

In these drawings:—

Figure 1 is a fragmentary vertical longitudinal section through the cover of a vehicle body showing the improved gate arranged thereupon and in a partially closed position;

Figure 2 is a fragmentary detail in vertical longitudinal section through the vehicle body cover showing the gate in a partially open position in full lines and in a full open position in dotted lines; and,

Figure 3 is an enlarged fragmentary detail in perspective showing the sectional construction of the gate and the arrangement of the bearing pintles upon the side portions of the same.

Having more particular reference to the drawings, in connection with which like characters of reference will designate corresponding parts throughout, C represents the cover of a vehicle body of the closed commercial type, provided with the usual top A and having a way formed in the rearward end thereof whereby access may be had to the interior of such vehicle body. Posts 1 are arranged upon the opposite sides of this rearwardly disposed way of the cover C and have each secured to their inner sides or faces, channeled guide strips 2, these guide strips, as will be noted, being vertically disposed and extending into proximity to the top A of the cover C in the Figures 1 and 2. Outwardly disposed laterally extending pockets 3 are formed in the outer sides of each of these channeled guide strips 2 and serve for a purpose which will be subsequently described.

Extending inwardly into the cover C and at substantially right angles with respect to the upper portion of the vertical channeled guide strips 2 are inclined channeled guide strips 4, which as will be noted, correspond in width and depth to the guide strips 2; the same being secured by suitable devices, not shown, to adjacent portions of the side walls of the cover C.

Openings 5 are formed in the upper portion of the inner sides of each of the channeled guide strips 2 and as will be noted, communicate with pockets formed rearwardly of such portions of the guide strips 2 adjacent the jointure of the channeled guide strips 4 therewith; stop strips or abutments 6 being arranged or formed upon adjacent portions of said strips 2 and 4, in the manner as shown in Figures 1 and 2, whereby to limit movement of the gate with respect thereto.

A gate is provided for the open rearward way of the cover C and comprises sections 7 and 8, which, if desired, may be of foraminated construction. Bearing brackets 9 are secured to the adjacent end portions of the frames of these several sections 7 and 8 and pivotally receive therethrough a connecting rod 10, the ends of which are

extended beyond the opposite side portions of the gate sections 7 and 8, as shown in the Figure 3. Also, laterally extending bearing pintles 10′ are fixedly secured to the intermediate portions of the opposite sides of these sections 7 and 8 and as will be noted, are of lengths corresponding to the extended portions of the rod 10.

The sectional gate is adapted to be slidably received in the rearward way of the cover C, the bearing pintles 10′ and the extended portions of the rod 10 being slidably received in the ways provided therefor by the channeled guide strips 2, that is, when the gate is in its closed or partially closed positions. Also, it will be understood that the bearing pintles 10′ of the upper section 7 and the extended portions of the rod 10 are adapted to be slidably received in the channeled guide strips 4 with movement of the gate to its open or partially open positions.

To facilitate movement of the gate to its open or closed positions, that is, when the same passes centre with respect thereto, a contractile coiled spring 11 is provided and is connected at one end to a portion of one side of the cover C, while the opposite end thereof is connected to a portion of the upper section 7. Also, it will be understood that this contractile coiled spring 11 through its connection with the gate will serve to lessen unnecessary and undesirable vibration of the same in the channeled guide strips 2 and 4.

The modus operandi of the invention may be stated to be as follows:

The gate when in its closed position will have the bearing pintles 10′ of the lower section 8 and the extended portions of the rod 10 engaged in the vertical channeled guide strips 2, while the bearing pintles 10′ of the upper section 7 will be arranged within the ways of the channeled guide strips 4 in proximity to their jointure with the guide strips 2. To open the gate, an upward thrust is imparted to the lower portion of the same, that is, to the lower section 8, whereupon the bearing pintles 10′ of the upper section 7 will move inwardly through the channeled guide strips 4, whereas the extremities of the rod 10 and the bearing pintles 10′ of the lower section 8 will ride upwardly through the channels of the guide strips 2. Because of the pivotal connection between the adjacent ends of the sections 7 and 8, it will be understood that the gate will be permitted to become broken at this particular point and therefore, will require materially less interior space during its movement to open or closed positions. The gate may be moved to its full open position whereat the bearing pintles 10′ of the section 8 will be passed rearwardly through the openings 5 formed in the upper portions of the inner sides of the channel guide strips 2, such pins then dropping into the pockets provided for rearwardly of said openings and forwardly of the abutment or stop strips 6. When in this position, the gate will assume that position as shown in dotted lines in the Figure 2 and obviously, accidental closing of the same will be absolutely prevented by reason of the locking-like engagement of the pintle pins 10′ of the section 8 in the receiving pockets therefor in proximity to the jointures of the channeled guide strips 4 with the channeled guide strips 2. During such inward sliding movement of the gate sections with respect to the body cover C, it will be understood that when the same has passed the centre of the contractile coiled spring 11, said spring will function to impart a pull thereto, and in consequence, facilitate movement of the gate to its open position. Should an operator of the gate be of a physique such as would render it impractical to move the same to full open position, it is to be understood that the same may be moved to a partially opened position, as shown in the Figure 2, the gate section 7 moving inwardly through the ways of the channeled guide strips 4 for a distance sufficient to permit the raising of the gate section 8 until the bearing pintles 10′ thereof can be dropped into the pockets 3 formed in the outer sides of the channeled guide strips 2. The gate will be thus locked in a partially opened position and the operator will not be compelled to move the same to its full open position as shown in dotted lines in the Figure 2.

To close the gate, it is only necessary to disengage the bearing pintles 10′ of the section 8 from the pockets provided therefor in proximity to the jointure of the channeled guide strips 4 with the channeled guide strips 2 or from the laterally off-set pocket 3, as hereinbefore described, whereupon the lower section 8 will be pulled downwardly, moving the inner section or upper section 7 outwardly with respect to the channeled guide strips 4 until it has been brought to the desired closed position. When in this closed position, it will be understood that the contractile coiled spring 11 will be placed under a tension sufficient to prevent undue vibratory movement of the gate.

From the fore-going, it will be understood that I have provided a simple but practical form of gate for the discharge ways of vehicle wagon covers, the same, because of its sectional construction, serving to give a materially greater interior area to the vehicle body cover C and in consequence permitting of greater loading capacity thereof.

Manifestly, the construction shown is capable of considerable modification and

such modification as is within the scope of my claim, I consider within the spirit of my invention.

I claim:—

The combination with a vehicle body cover having a way therein, of vertical channeled strips secured to the inner sides of said way, inclined channeled strips integral and communicating with said vertical strips extending at substantially right angles from said vertical strips into the vehicle body, each of said vertical strips having an opening formed in the upper portion of the inner sides thereof above the jointure of the inclined strips with the same, laterally offset pockets formed in the upper portion of the outer sides of said vertical channeled guide strips, a gate for said way, said gate comprising sections, a pivot rod inter-connecting the adjacent ends of said sections and having its opposite extremities extended beyond the opposite sides of such sections and slidably receivable in said vertical and inclined channeled guide strips, laterally extending bearing pintles fixedly secured to the intermediate portions of the opposite sides of said gate sections and slidably receivable in said vertical and inclined channeled guide strips, certain of said bearing pintles being adapted to be passed through the openings formed in the upper portions of the inner sides of said vertical channeled guide strips, at times, whereby to retain the gate in its full open position and being adapted, at other times, to be received in the laterally off-set pockets formed in the upper portion of said vertical channeled guide strips whereby to retain the gate in its partially open position, and a contractile coiled spring connected at one end to a portion of one of the sections of said gate and at its other end to a portion of the vehicle body cover.

In witness whereof I have hereunto set my hand.

CHARLES W. SINES.