

No. 693,786.

Patented Feb. 18, 1902.

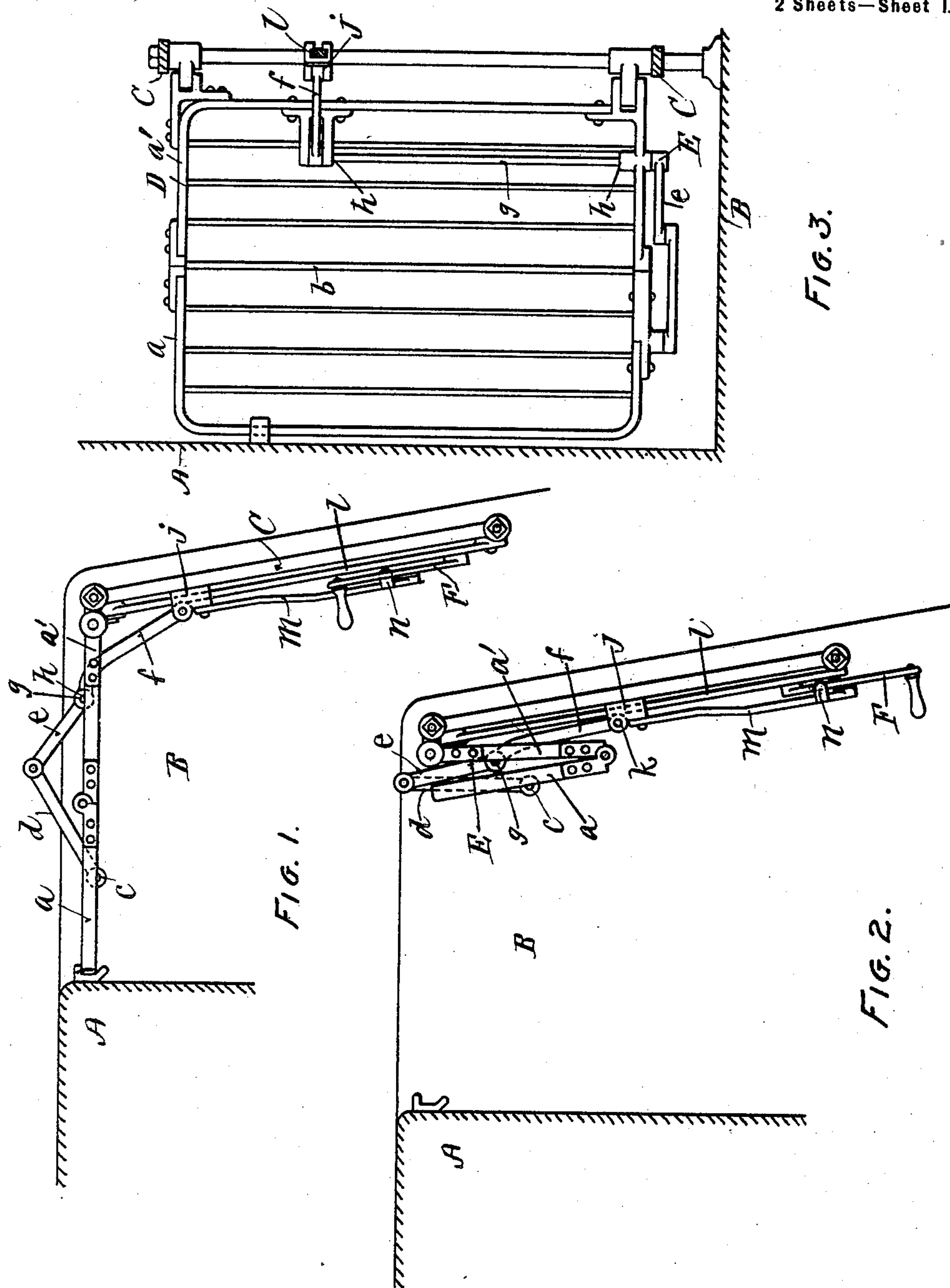
N. H. COLWELL.

FOLDING GATE FOR RAILWAY CARS.

(Application filed Oct. 30, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES,

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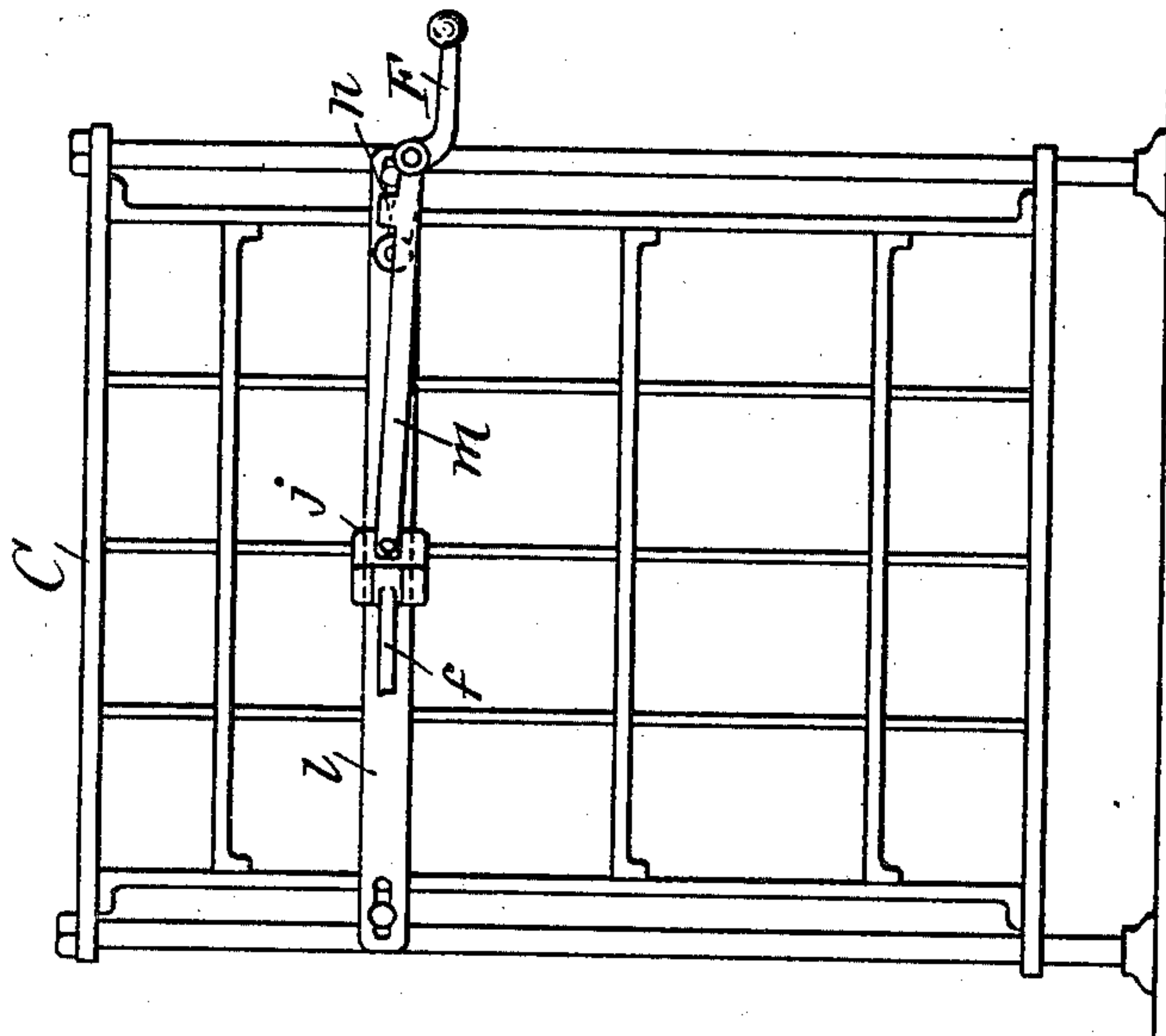


FIG. 5.

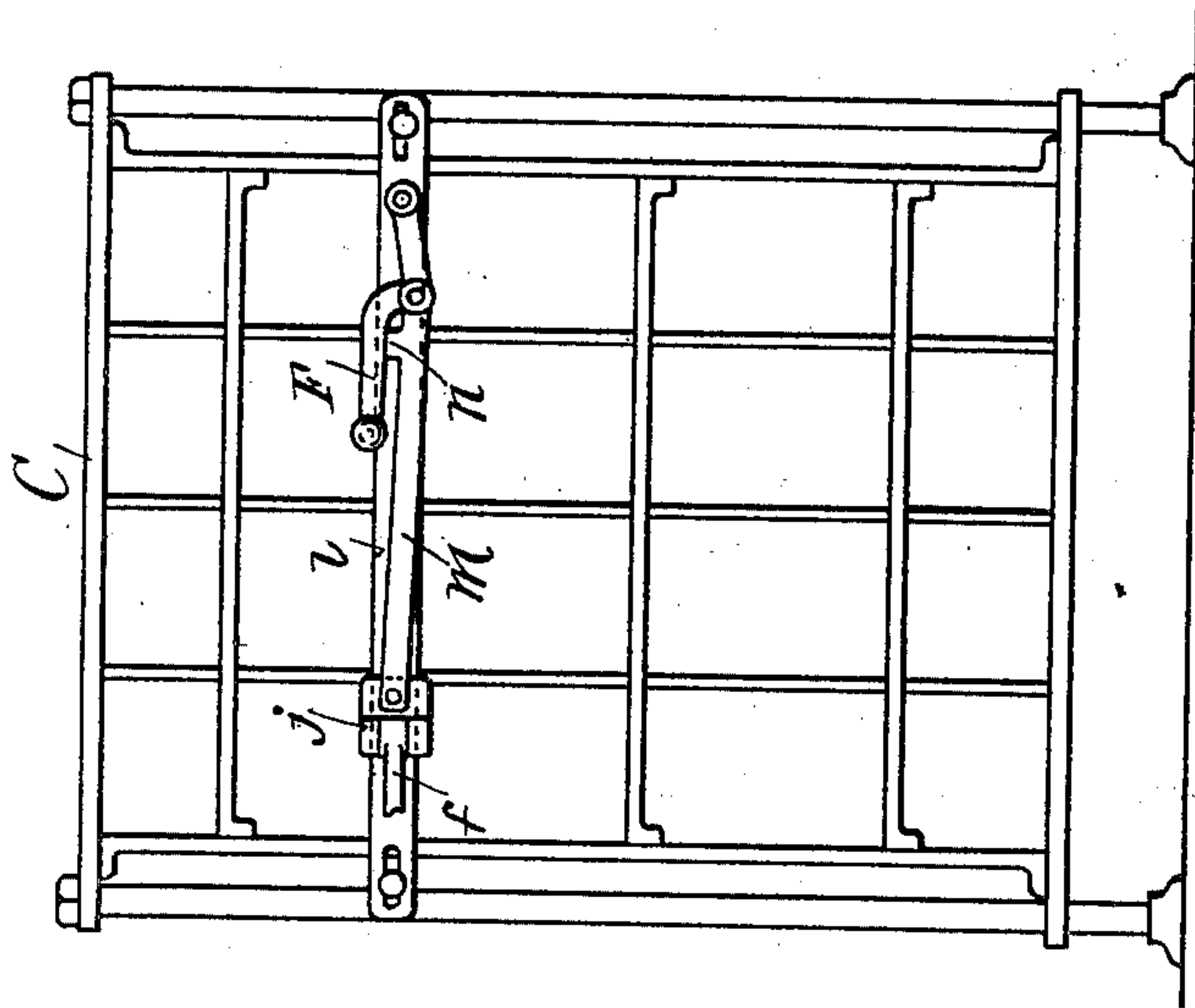


FIG. 4.

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# UNITED STATES PATENT OFFICE.

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## FOLDING GATE FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 693,786, dated February 18, 1902.

Application filed October 30, 1901. Serial No. 80,547. (No model.)

*To all whom it may concern:*

Be it known that I, NICHOLAS H. COLWELL, a citizen of the United States, residing at Pawtucket, in the State of Rhode Island, have  
5 invented a new and useful Improvement in Folding Gates for Railway-Cars, of which the following is a specification.

My invention relates to that class of car-gates the hinged parts of which fold together  
10 in order to occupy less space in width when the gate is opened than when closed; and my invention consists in certain improvements in the operating mechanism of the gate.

In the accompanying drawings, Figure 1  
15 represents a top view of my improvement with the gate in its closed condition. Fig. 2 represents the same with the gate in its opened condition. Fig. 3 represents an elevation showing the inner side of the closed gate.  
20 Fig. 4 represents an elevation showing the inner side of the guard-rail of the car and the gate-actuating mechanism when the gate is closed. Fig. 5 represents the same when the gate is opened.

25 In the drawings, A represents a portion of the body of the car; B, a portion of the platform; C, the guard-rail, and D the folding gate, the said gate being made in two sections  $a$   $a'$ , hinged together at the pivot-rod  $b$ ,  
30 the pivoting-point being located at the outer side of the vertical median line of the gate-sections, as shown in Figs. 1 and 2, and at the point  $c$ , located at the inner side of the said median line, is pivoted the link  $d$ , the  
35 outer end of which is jointed to the end of the outer arm  $e$  of the offset lever E, the opposite arms  $e$  and  $f$  of which are connected with each other by means of an integral connecting-bar or rock-shaft  $g$ , the said lever E  
40 being pivoted in the bearings  $h$   $h$ , which are located at the outer side of the median line of the gate-section  $a$ , and to the end of the inner arm of the lever E is jointed the slide  
45  $j$  at the point  $k$ , the said slide being caused to move back and forth upon the fixed guide-bar  $l$  by means of the hand-lever F, which is connected with the slide  $j$  by means of the link  $m$ , the said link being provided at its  
50 upper edge with the stop projection  $n$ , which at the forward throw of the hand-lever F obstructs the downward movement by the en-

gagement of the under edge of the lever F with the upper side of the stop projection, as shown in Fig. 4, and at the rearward throw of the lever F obstructs the downward move-  
55 ment by the engagement of the under side of the stop projection with the upper edge of the lever, as shown in Fig. 5. When the lever F is thrown forward, the gate will be closed, as shown in Fig. 1, and when drawn  
60 back the gate will be opened and folded, as shown in Fig. 2, the offset lever E and link  $d$  serving to effect the desired folding and unfolding of the gate-sections.

I do not in this application claim the com-  
65 bination of the folding gate-sections hinged to each other with a lever and a connecting-link pivoted to the folding gate-sections at opposite sides of the hinge-joint between them and forming therewith a lazy-tongs move-  
70 ment, whereby the gate-sections may be either opened or folded, the same being shown in this application, but claimed in my prior application, Serial No. 54,721.

I claim as my invention—

75 1. In a folding gate, the combination of the hinged gate-sections  $a$  and  $a'$ , with the offset lever E, journaled in the section  $a$ , and having an outer arm  $e$ , an inner arm  $f$  and the connecting-bar  $g$ , the link  $d$ , connecting the  
80 outer arm  $e$ , with the gate-section  $a'$ , the slide  $j$ , jointed to the inner arm  $f$ , the hand-lever F and the link  $m$ , provided with the stop projection, adapted to limit the movement of the hand-lever, substantially as described. 85

2. In a folding gate, the combination of the hinged gate-sections  $a$  and  $a'$ , the offset lever E, journaled in the gate-section  $a$  at a point  
90 outside of the median line of the said gate-section, and having an outer arm  $e$ , located beyond the horizontal edge of the gate, an actuating inner arm  $f$ , and the connecting-bar  $g$ , with the link  $d$ , pivoted to the gate-section  $a'$ ,  
95 at a point outside of the median line of the gate-section, and connecting the said gate-section with the outer end of the arm  $e$  of the lever, substantially as described.

NICHOLAS H. COLWELL.

Witnesses:

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