

No. 758,925.

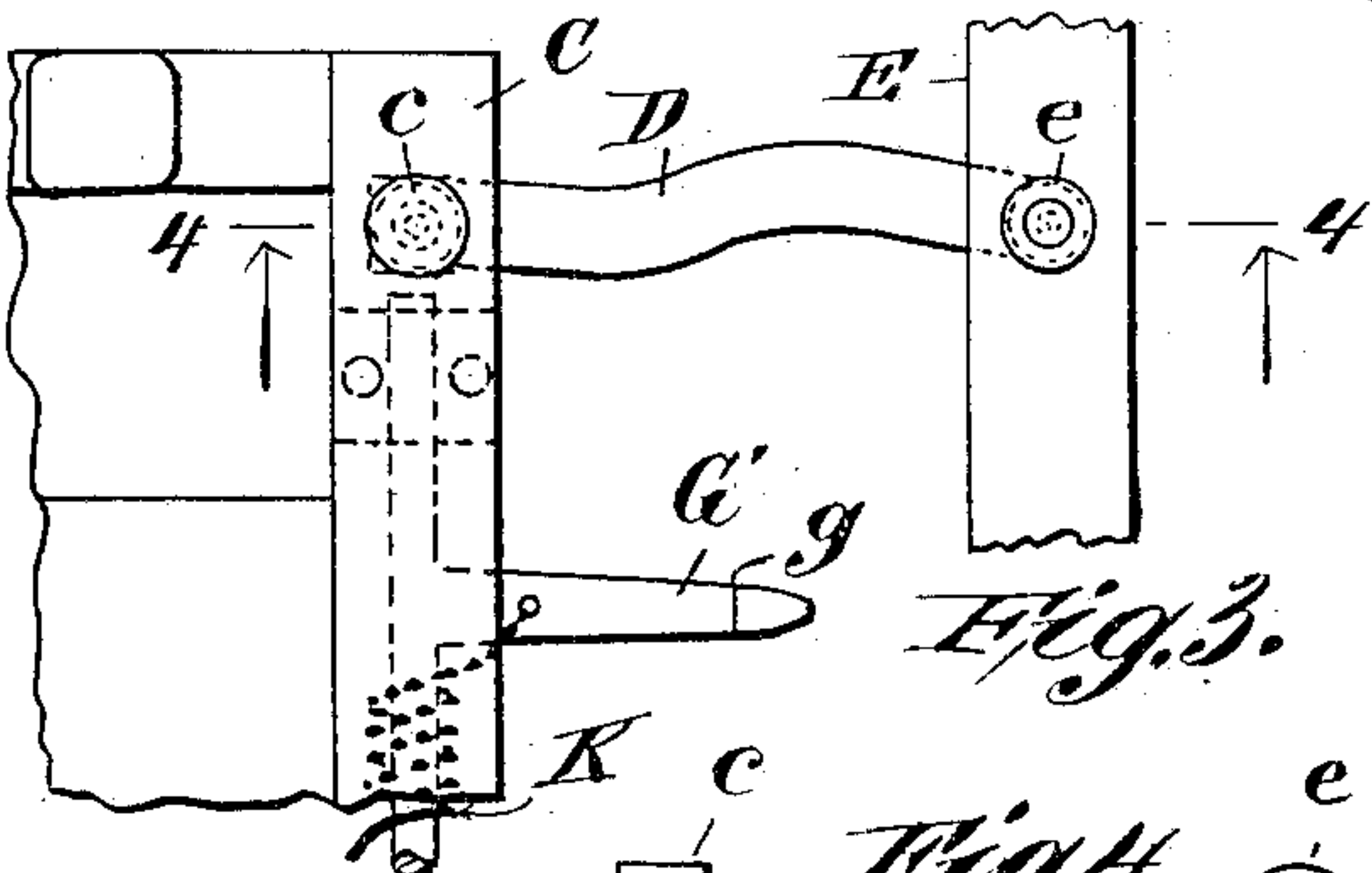
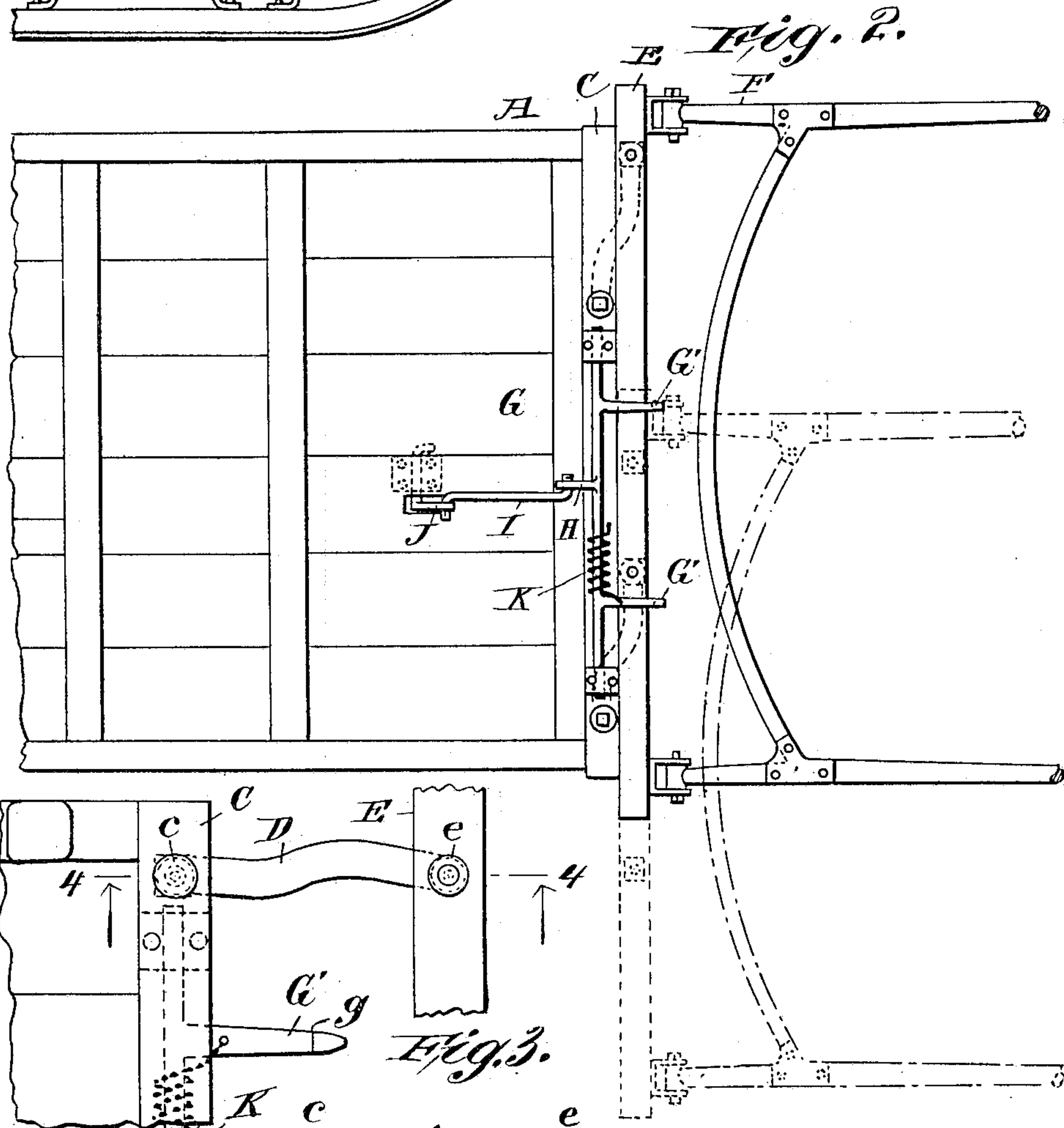
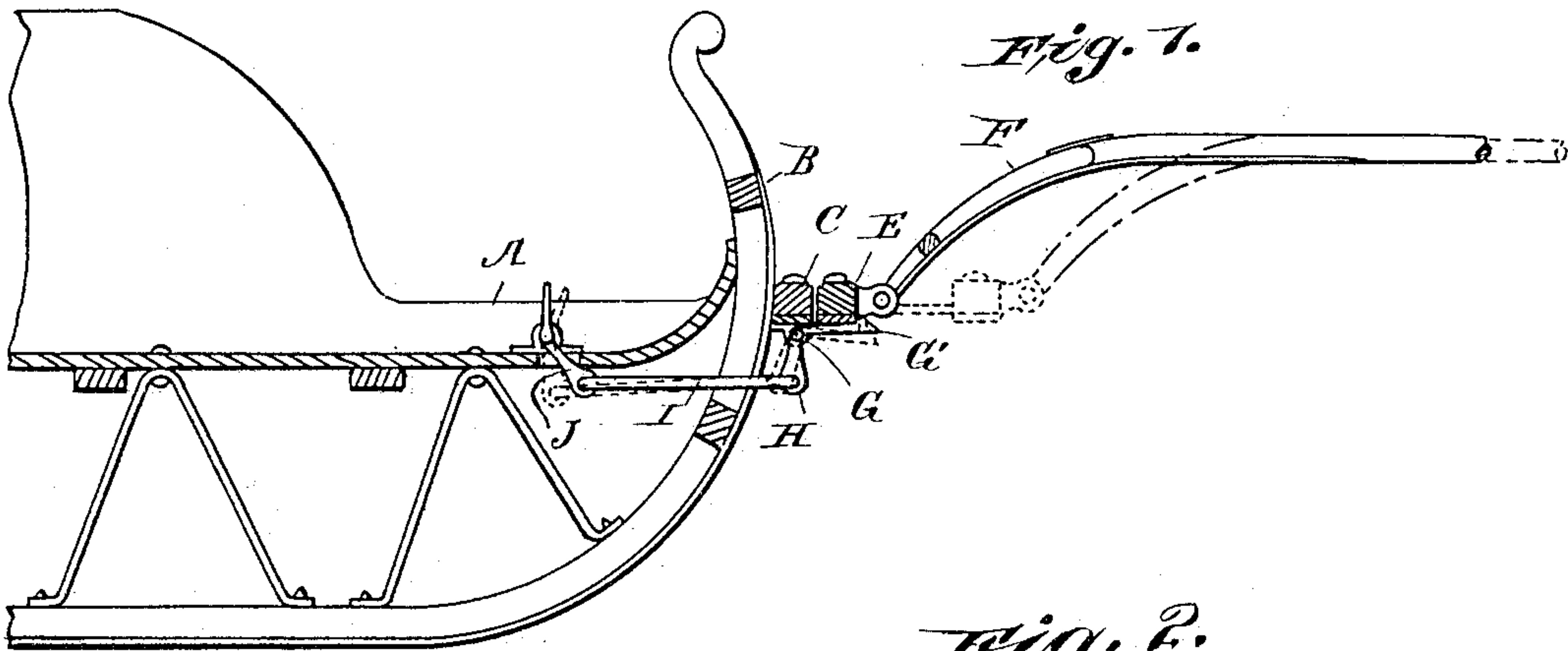
PATENTED MAY 3, 1904.

G. L. LAWRENCE & S. N. PUFF.

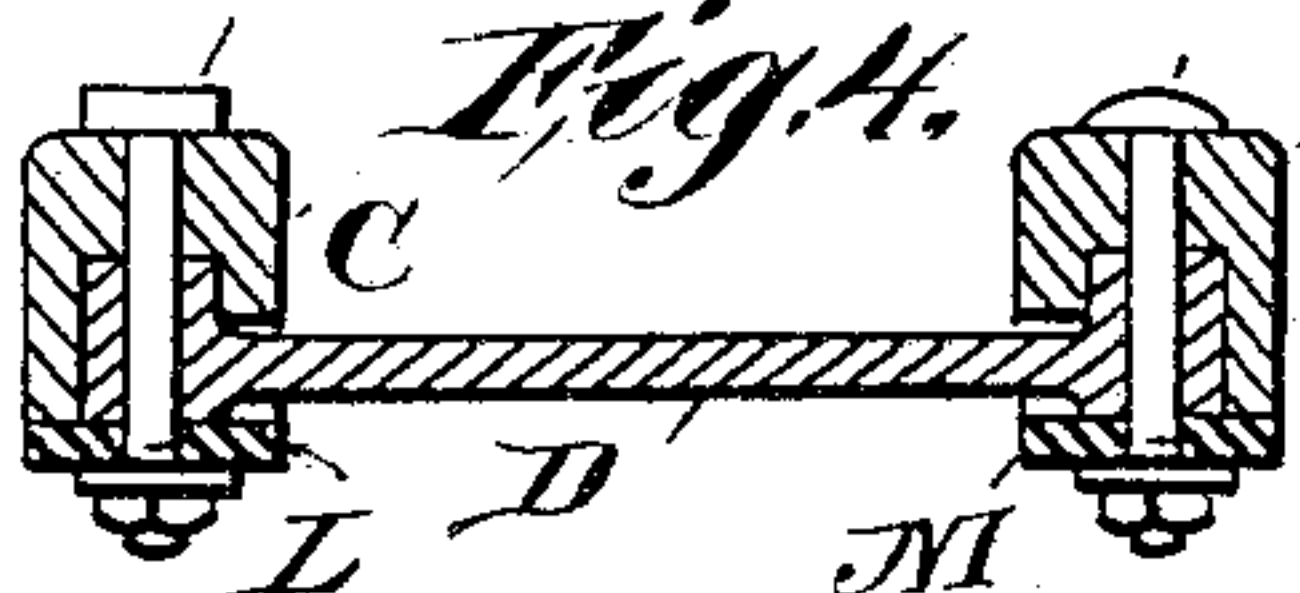
THILL SHIFTING DEVICE.

APPLICATION FILED JUNE 18, 1003.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## THILL-SHIFTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 758,925, dated May 3, 1904.

Application filed June 18, 1903. Serial No. 161,976. (No model.)

*To all whom it may concern:*

Be it known that we, GABRIEL L. LAWRENCE, residing at Hamburg, and SAMUEL N. PUFF, residing at Sussex, in the county of Sussex  
5 and State of New Jersey, have invented a certain new and useful Improvement in Thill-Shifting Devices, of which the following is a specification.

We will first describe the improvement in  
10 detail and then point out the novel features in the claims.

In the accompanying drawings, Figure 1 is a partial sectional view of a sleigh having attached thereto a thill-shifting device embodying our improvement. Fig. 2 is an under  
15 side view of a portion of a sleigh having attached thereto a thill-shifting device embodying our improvement. Fig. 3 is an enlarged partial plan of detail mechanism of connecting-link; and Fig. 4 is a sectional view taken  
20 on the plane of the dotted lines 4-4, Fig. 3.

Similar letters of reference designate corresponding parts in all the figures.

A designates the frame of a vehicle, (here  
25 shown as a sleigh,) and B B are the runners of said sleigh. To the runners B B are attached by bolts or otherwise a bar, as C. To the under side of this bar, as C, we have shown as fastened a strip, as L, preferably of metal.

Bolted between the bar C and strip L are  
30 links, as D. These links, as D, are also shown as bolted between another bar, as E and strip M, preferably of metal. In Fig. 4 we have shown the links D as of greater thickness at the points where the bolts *c* and *e* pass through  
35 them, locking them to the bars C and E. Another bar, as G, preferably of metal, is shown as arranged on the under side of the strip, as L. This bar G has attached thereto or formed  
40 integral therewith projecting lugs, as G'. At their forward ends these projecting lugs, as G', are provided with notches or catches, as *g*. These notches or catches, as *g*, are arranged at a distance from the bar C equal to  
45 the width of the bar E. Another lug, as H, is made integral with or attached to said bar, as G, and another bar, as I, toggles with said lug, as H, and runs back to a lever-piece J. The bars C and E are preferably so rounded out

where the links, as D, are connected to them  
50 as to permit the said links, as D, to assume positions shown in dotted outline in Fig. 2 when the bars C and E are brought together. The thills F are shown as attached to the bar E.

K is a spring intended to return the bar G  
55 to its normal position when the pressure on the lever-piece J is released.

We will assume that the bar E is in the position shown by the heavy lines in Fig. 2. In this position the projecting lugs G', by means  
60 of their notches or catches *g*, hold said bar E in position. The projecting lugs G' are thrown up, so as to grasp and hold said bar E by means of the spring K. When the driver of the vehicle desires to shift his horse, he presses  
65 against the lever-piece J, thereby causing the bar I to pull back the lug H. This movement will pull down the lugs G' and the bar E will be pulled by the horse away from the bar C. The releasing of the bar E will throw said bar  
70 sidewise and it is only necessary to pull upon the horse, when said bar E will assume the position shown in dotted outline in Fig. 2. The bar E will be locked in this position by the lugs G' and their notches or catches *g*. When  
75 it is desired to have the thills again assume their positions directly in front of the vehicle, the lever-piece J is pressed, thereby releasing the hold of the lugs G' and their notches or catches *g* on the bar E, and the bar E will  
80 swing around in front of the vehicle and a pull on the horse will bring said bar E against the bar C, when the lugs G', with their notches or catches *g*, will grasp the bar E and hold it  
85 in position against the bar C.

The strips L and M are preferably used because of the greater strength they impart to the bars C and E; but they are not essential parts of our improvement.

The links, as D, will of course be so dis-  
90 posed that the pull on the bar E will throw said bar to one side.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination with a vehicle, of a  
95 horizontally-movable transverse draft-bar arranged in front thereof and adapted to receive the thills, links pivoted to and loosely con-



necting the vehicle and said transverse draft-bar, a lock for engaging the bar in either of its retracted positions, and means for disengaging said lock.

5 2. The combination with a vehicle having a transverse bar arranged in front thereof, a horizontally - movable draft - bar arranged against the front side of said transverse bar, horizontal links pivotally connected at their  
10 opposite ends to the two bars and arranged parallel to each other, means for locking the bars together, and means within the vehicle for disengaging the locking means.

3. The combination of a movable bar to  
15 which thills may be attached, links connecting said movable bar with a vehicle-body, mechanism for locking said movable bar against the vehicle-body, and a device for releasing said lock, the links connecting said movable  
20 bar being so disposed that a pull on said movable bar when the same is unlocked from its position in front of said vehicle-body will throw said movable bar to one side of the vehicle-body and that a pull on said movable  
25 bar when the same is unlocked from its position to one side of the vehicle-body will throw said movable bar more than half-way in front of the vehicle-body, substantially as specified.

4. The combination of a movable bar to  
30 which thills may be attached, links connecting said movable bar with a vehicle-body, mechanism for locking said movable bar against the vehicle-body, recesses in said movable bar and vehicle-body in which said connecting-links  
35 may rest when said movable bar is locked

against the vehicle-body, and a device for releasing said locking mechanism, the said connecting-links being so disposed that a pull on said movable bar when the same is unlocked  
40 will throw said movable bar to one side of said vehicle-body, and that a pull on said movable bar when the same is unlocked from its position to one side of the vehicle-body will throw said movable bar more than half-way in front  
45 of the vehicle-body, substantially as specified.

5. The combination of a movable bar to which thills may be attached, links connecting said movable bar to a stationary bar, mechanism for locking said movable and stationary  
50 bars against each other, recesses in said movable and stationary bars in which said connecting-links may rest while said movable and stationary bars are locked against each other, and a device for releasing said locking  
55 mechanism, the said connecting-links being so disposed that a pull on said movable bar when the same is unlocked from its position in front of said stationary bar will throw said movable bar to one side of said stationary bar,  
60 and that a pull on said movable bar when the same is unlocked from its position to one side of said stationary bar will throw said movable bar more than half-way in front of said stationary bar, substantially as specified.

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