

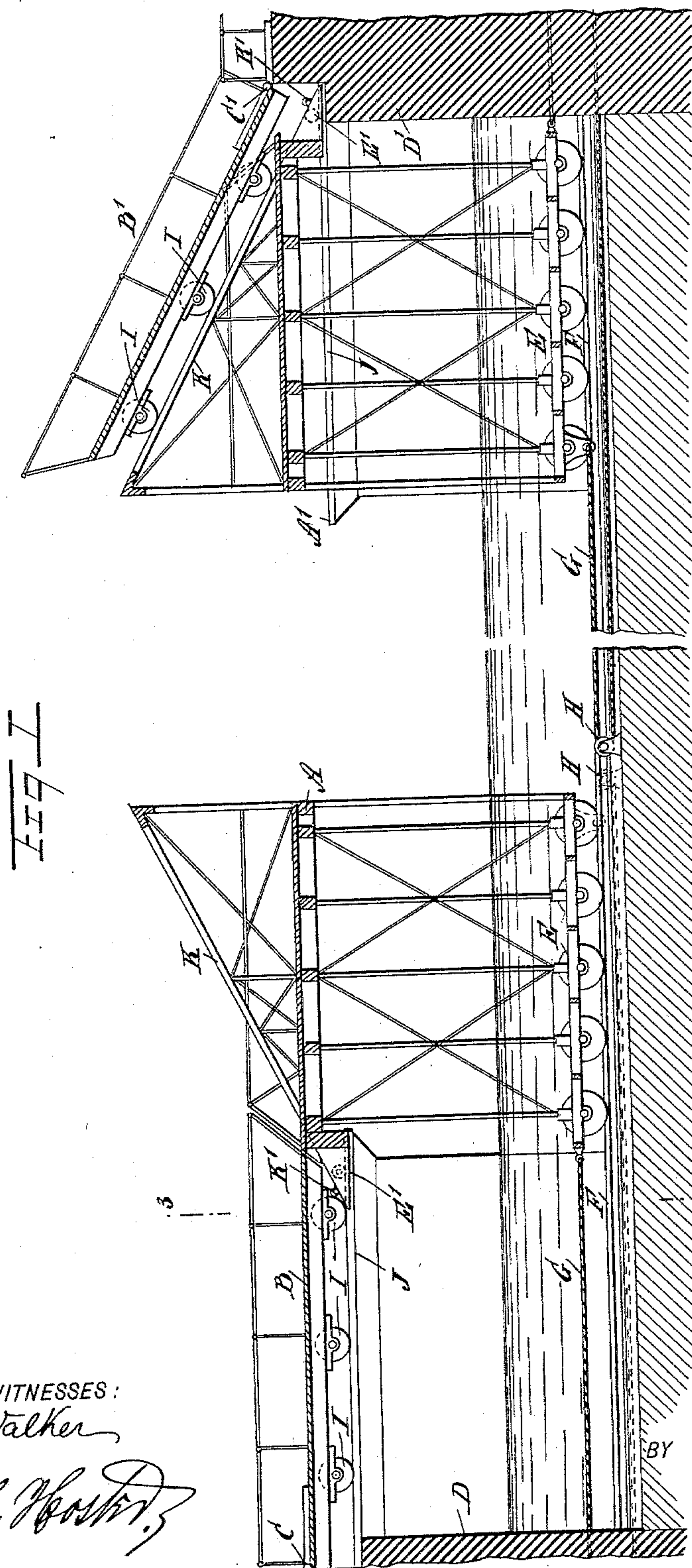
(No Model.)

3 Sheets—Sheet 1.

W. L. SAMPSON.  
DRAWBRIDGE.

No. 598,012.

Patented Jan. 25, 1898.



WITNESSES:  
*W. Walker*  
*Geo. G. Foster*

INVENTOR  
*W. L. Sampson*  
BY *Mumford*  
ATTORNEYS.

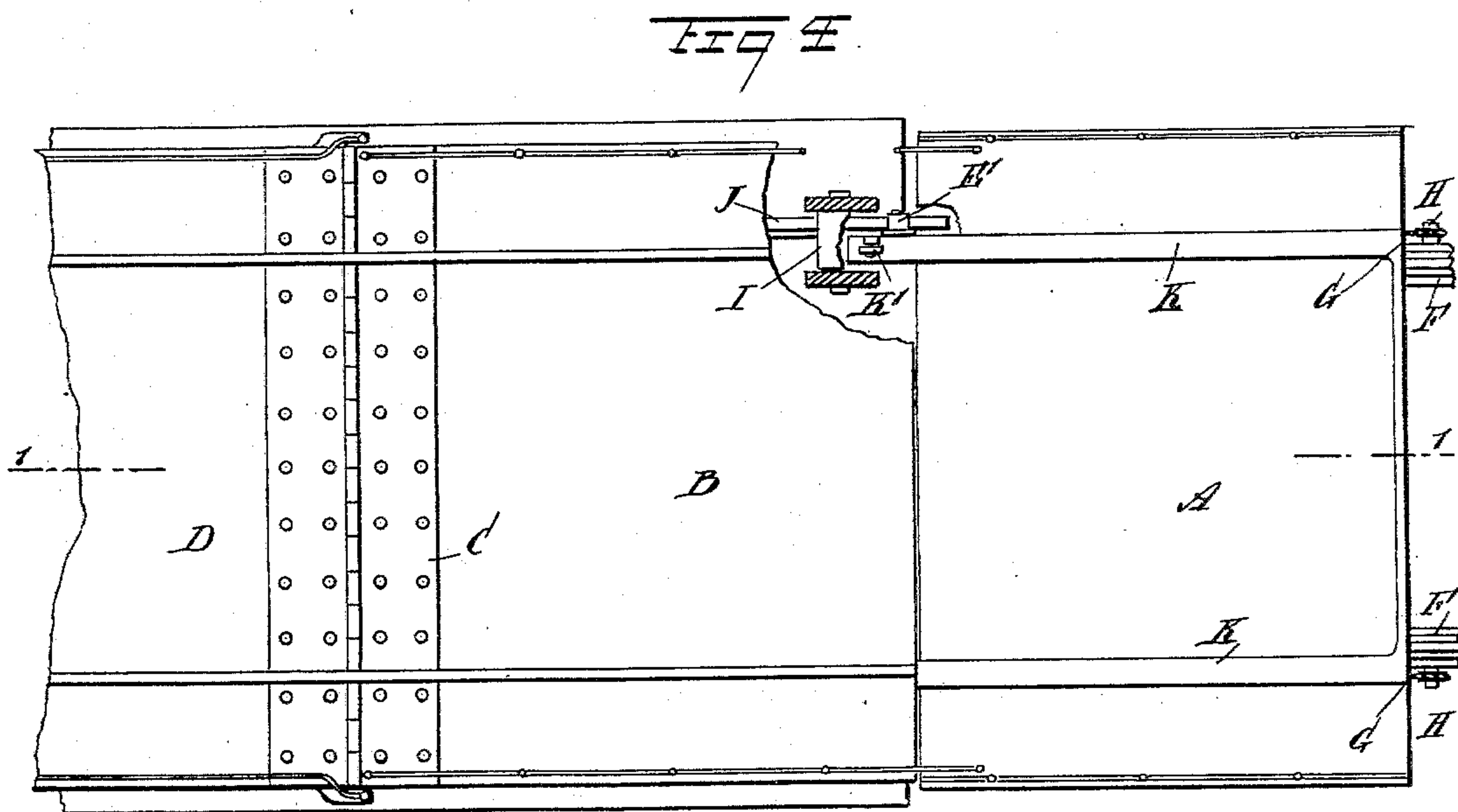
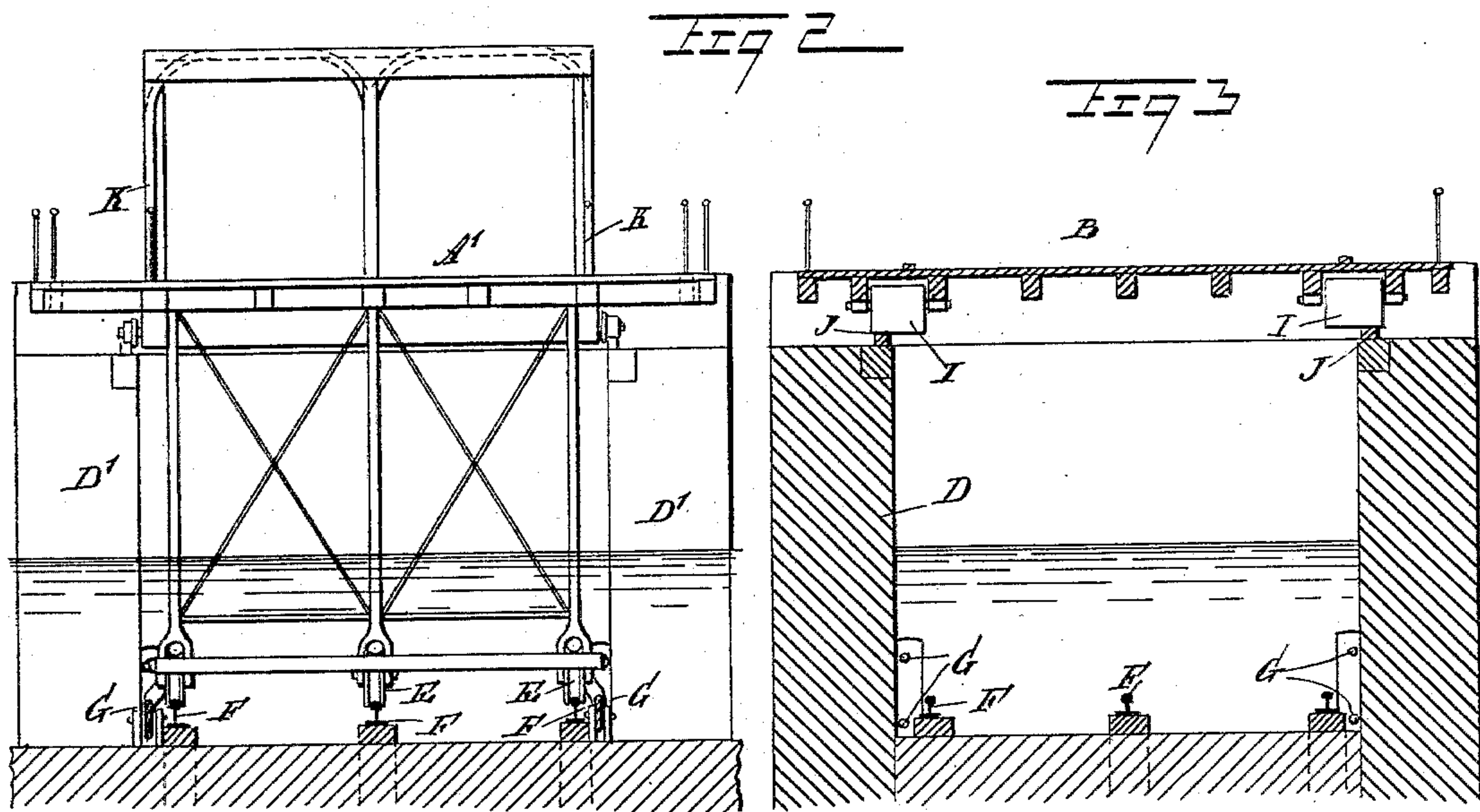
(No Model.)

3 Sheets—Sheet 2.

W. L. SAMPSON.  
DRAWBRIDGE.

No. 598,012.

Patented Jan. 25, 1898.



WITNESSES:

*H. Walker*

*Geo. G. Hoster*

INVENTOR

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ATTORNEYS.



(No Model.)

3 Sheets—Sheet 3.

W. L. SAMPSON.  
DRAWBRIDGE.

No. 598,012.

Patented Jan. 25, 1898.

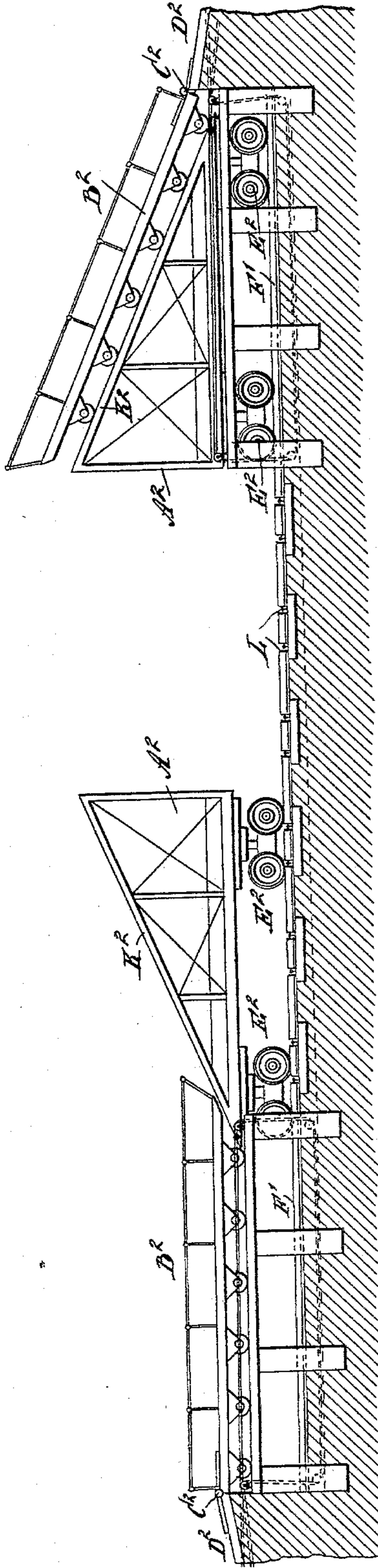


Fig 5

WITNESSES:

H. Walker  
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INVENTOR  
W. L. Sampson.  
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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

WILLIAM L. SAMPSON, OF OCEAN GROVE, NEW JERSEY.

## DRAWBRIDGE.

SPECIFICATION forming part of Letters Patent No. 598,012, dated January 25, 1898.

Application filed May 27, 1897. Serial No. 638,350. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM L. SAMPSON, of Ocean Grove, in the county of Monmouth and State of New Jersey, have invented a new and Improved Drawbridge, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved drawbridge which is simple and durable in construction and arranged to permit of conveniently opening and closing the bridge in a comparatively short time to reduce the interruption of the traffic over the bridge to a minimum.

The invention consists in such combinations and features of construction as will be fully described hereinafter, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation, on the line 1 1 of Fig. 4, of the improvement as arranged for a waterway. Fig. 2 is an end elevation of the same. Fig. 3 is a cross-section of the same on the line 3 3 of Fig. 1. Fig. 4 is a plan view of the improvement with part in section, and Fig. 5 is a side elevation of the improvement as arranged over railroad-tracks or a viaduct.

The improved drawbridge, as illustrated in Figs. 1 to 4, is formed with two spans  $A A'$  and aprons  $B B'$ , connected by hinges  $C C'$ , respectively, with the abutments  $D D'$  on the shores of the waterway or on piers in the same, if the device is used on a very broad river. Each of the spans  $A A'$  is mounted to travel and is for this purpose provided with wheels  $E$ , engaging the tracks  $F$  laid in the bed of the waterway, and suitable means are employed for moving the spans  $A$  and  $A'$  across the waterway into a closed position with the ends of the spans adjoining, or into an open position, as indicated at the left in Fig. 1, to permit marine vessels to pass through the open bridge. In order to impart this transverse movement to the spans  $A$  and  $A'$ , suitable devices may be employed. For instance, as shown in the drawings, a rope or chain  $G$  is connected with the ends of the span and passes over a pulley  $H$ , located in the bed of

the waterway at or near the middle thereof, the other end of the rope extending to a drum on shore, so as to impart a traveling motion to the said rope to draw the span into an open or a closed position, as desired. It is understood that the drum on which the rope  $G$  winds is part of a suitable machine under the control of the engineer, bridge-tender, or other person.

When the spans  $A$  and  $A'$  are in a closed position, then their inner ends abut one on the other and their outer ends abut on the aprons  $B B'$ , which in turn are hinged to the abutments, so that a continuous bridge is formed for vehicles, passengers, railroad-cars, and the like. Each of the parts of the drawbridge is provided with the usual gangways, railings, foot-paths, &c., as are found in ordinary bridges. Each of the aprons  $B$  or  $B'$  is provided on its under side with wheels  $I$ , normally resting on tracks  $J$ , and adapted to travel up inclines  $K$ , formed on the corresponding span  $A$  or  $A'$ . The lower ends of the inclines  $K$  are provided with wheels  $E'$ , traveling in the tracks  $J$  at the time the span  $A$  or  $A'$  is drawn toward the abutment, so that the wheels  $I$  travel up the incline  $K$  and thereby move or swing the aprons into an inclined position with the apron supported on the incline and corresponding span.

In order to ease the upward travel of the outermost wheels  $I$  on the incline  $K$ , I prefer to provide the latter with a small friction-roller  $K'$ , as indicated in the drawings.

Now it will be seen that by the arrangement described the spans  $A$  and  $A'$  can be readily moved from the abutments to close the waterway or toward the abutments to open the waterway and at the same time swing the aprons  $B$  and  $B'$  upward, so that the bridge at the abutments  $D D'$  is practically closed by the angular aprons, and consequently persons and vehicles are not liable to accidentally pass into the waterway, as is frequently the case when drawbridges are open and proper gates are not used at the beginning of the draw.

As shown in Fig. 5, the spans  $A^2$  are mounted on trucks  $E^2$ , traveling on rails  $F'$ , extending over a railroad-crossing  $L$ , and the said spans are provided with inclines  $K^2$ , on which travel the wheels of the aprons  $B^2$ , connected



by hinges C<sup>2</sup> with the abutment D<sup>2</sup>. Suitable means are employed for moving the spans toward and from each other for closing and opening the railroad-crossing whenever necessary.

It will be seen that by the arrangement described the bridge can be very quickly opened or closed to interrupt the traffic on the bridge but a short time, at the same time forming a safety device for the bridge when the draw is open, as no gates or the like are necessary.

I do not limit myself to the particular construction shown and described, as it is evident that the spans may be differently mounted and different means may be employed for moving the spans toward and from each other.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A drawbridge, comprising spans, tracks on which the spans are mounted to move toward and from each other to close and open the bridge, an incline on each of the spans, aprons having wheels adapted to travel on the said inclines, and hinges for connecting

the aprons to abutments, substantially as shown and described.

2. A drawbridge, comprising spans, tracks on which the spans are mounted to move toward and from each other to close and open the bridge, an incline on each of the spans, aprons having wheels adapted to travel on the said inclines, hinges for connecting the aprons to abutments, and means substantially as described for moving the said spans toward and from each other, as set forth.

3. The combination with an abutment, of a movable span having an inclined surface thereon, the inclined surface running throughout the length of the span, and an apron hinged to the abutment and supported horizontally thereby, the length of the apron being equal to that of the span, and the inclined surface of the span moving under the apron to raise the apron as the span moves toward the abutment.

WILLIAM L. SAMPSON.

Witnesses:

SOLOMON MEAD,  
ELIAS Q. LYON.