

No. 743,901.

PATENTED NOV. 10, 1903.

A. H. MALLERY.
TRANSFER BRIDGE.

APPLICATION FILED FEB, 7, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

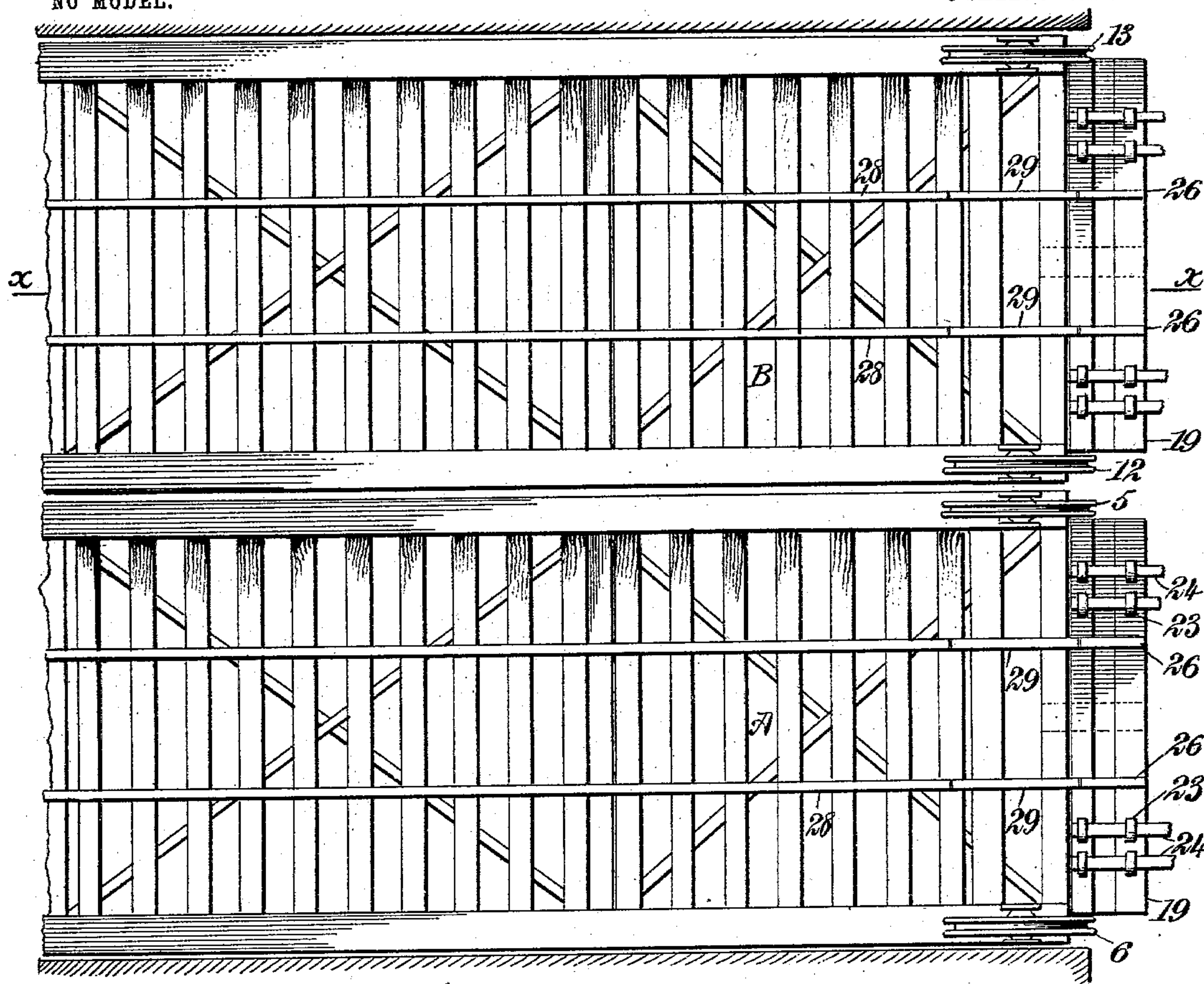


Fig. 1.

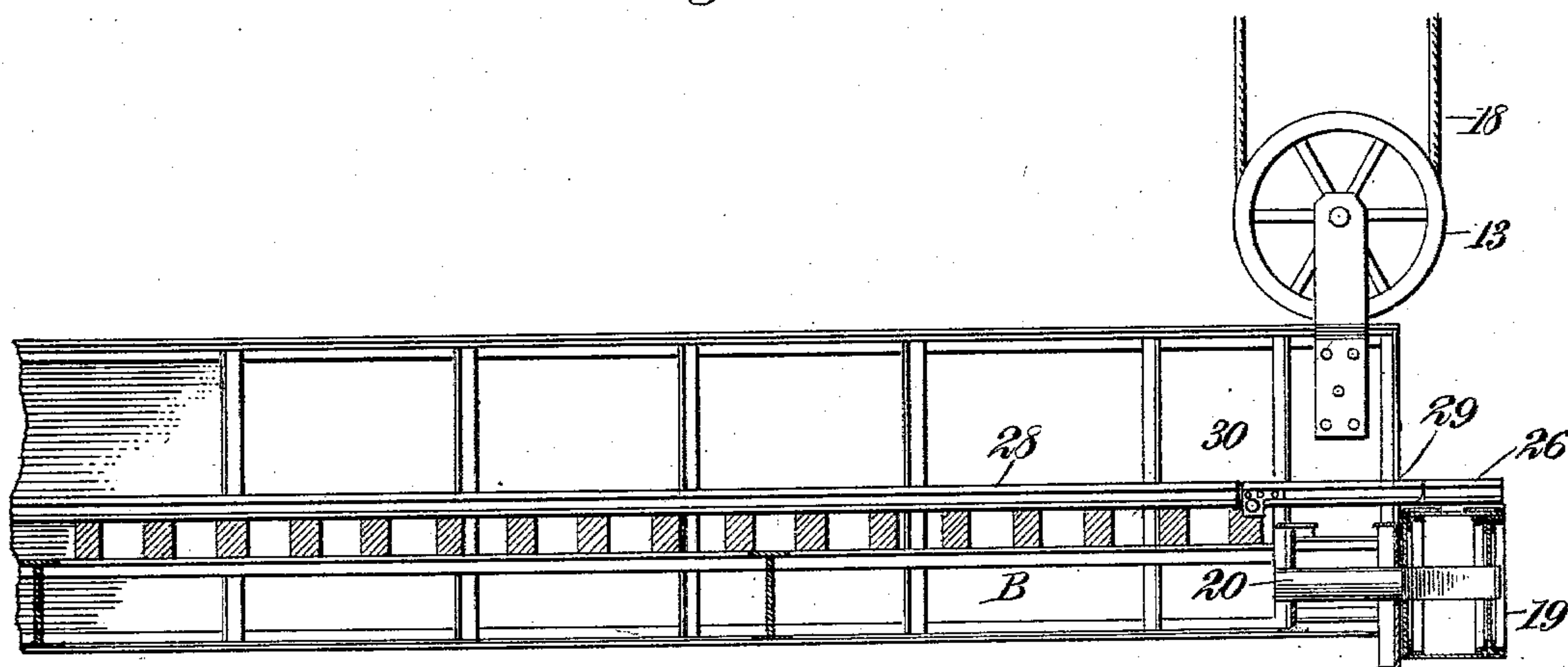


Fig. 2.

WITNESSES:

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C. R. Ferguson

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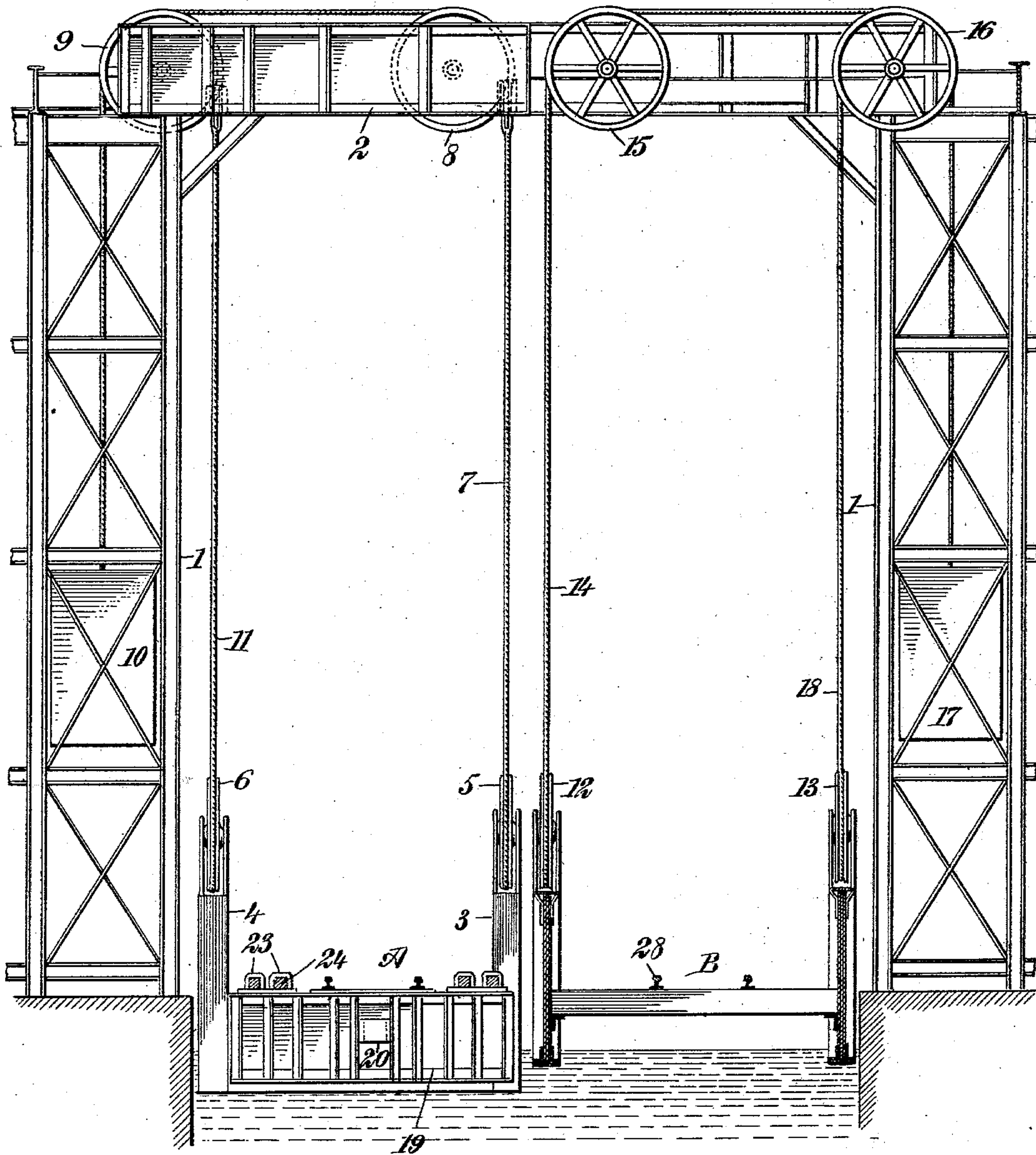
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3 SHEETS—SHEET 2.

Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

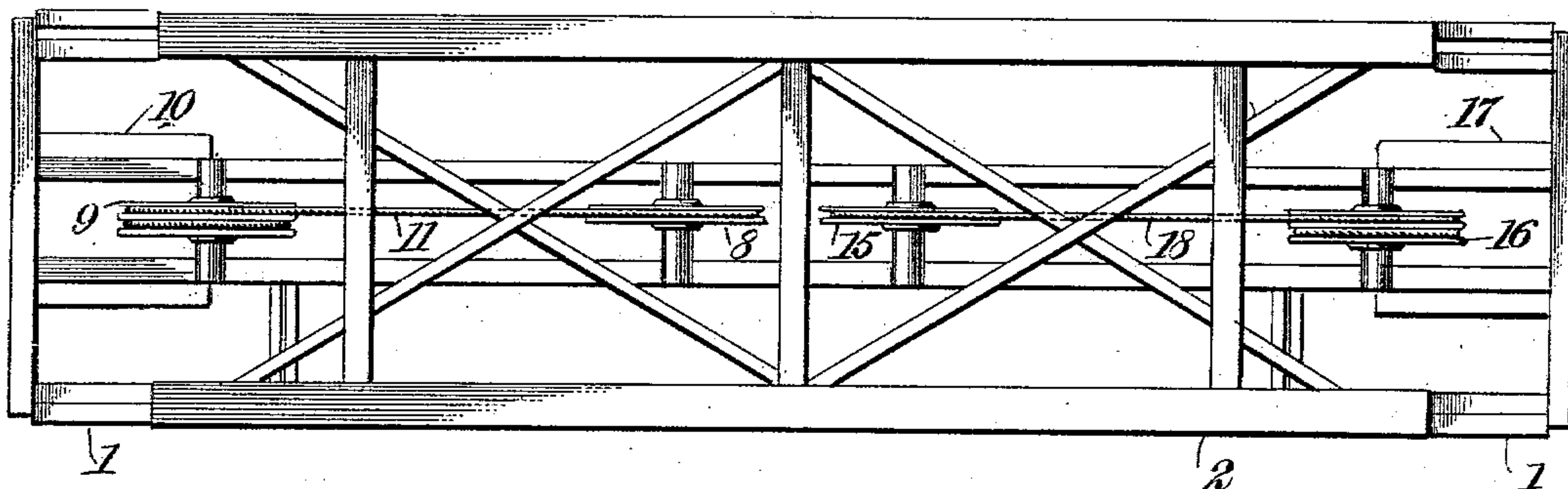


Fig. 5.

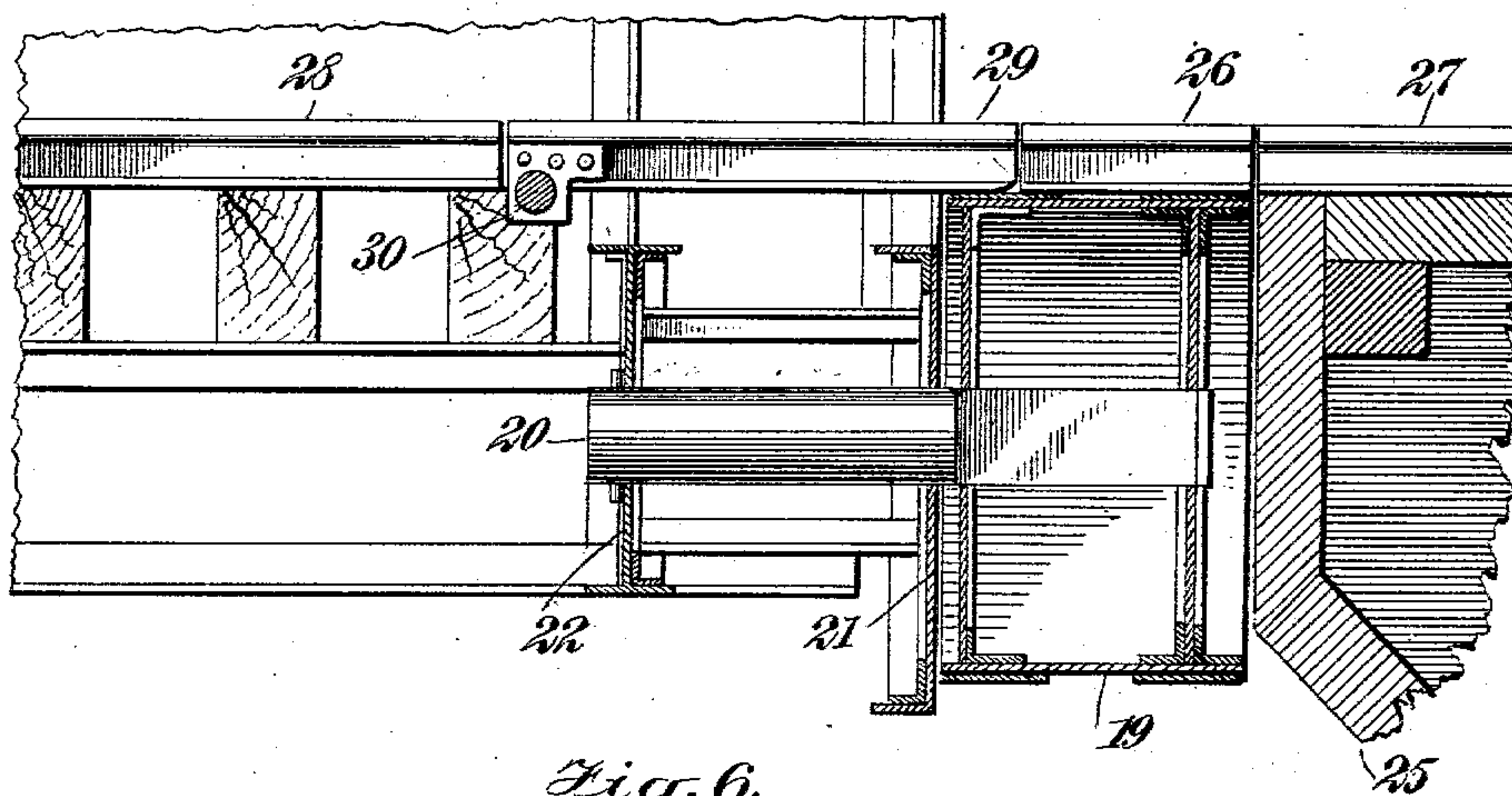
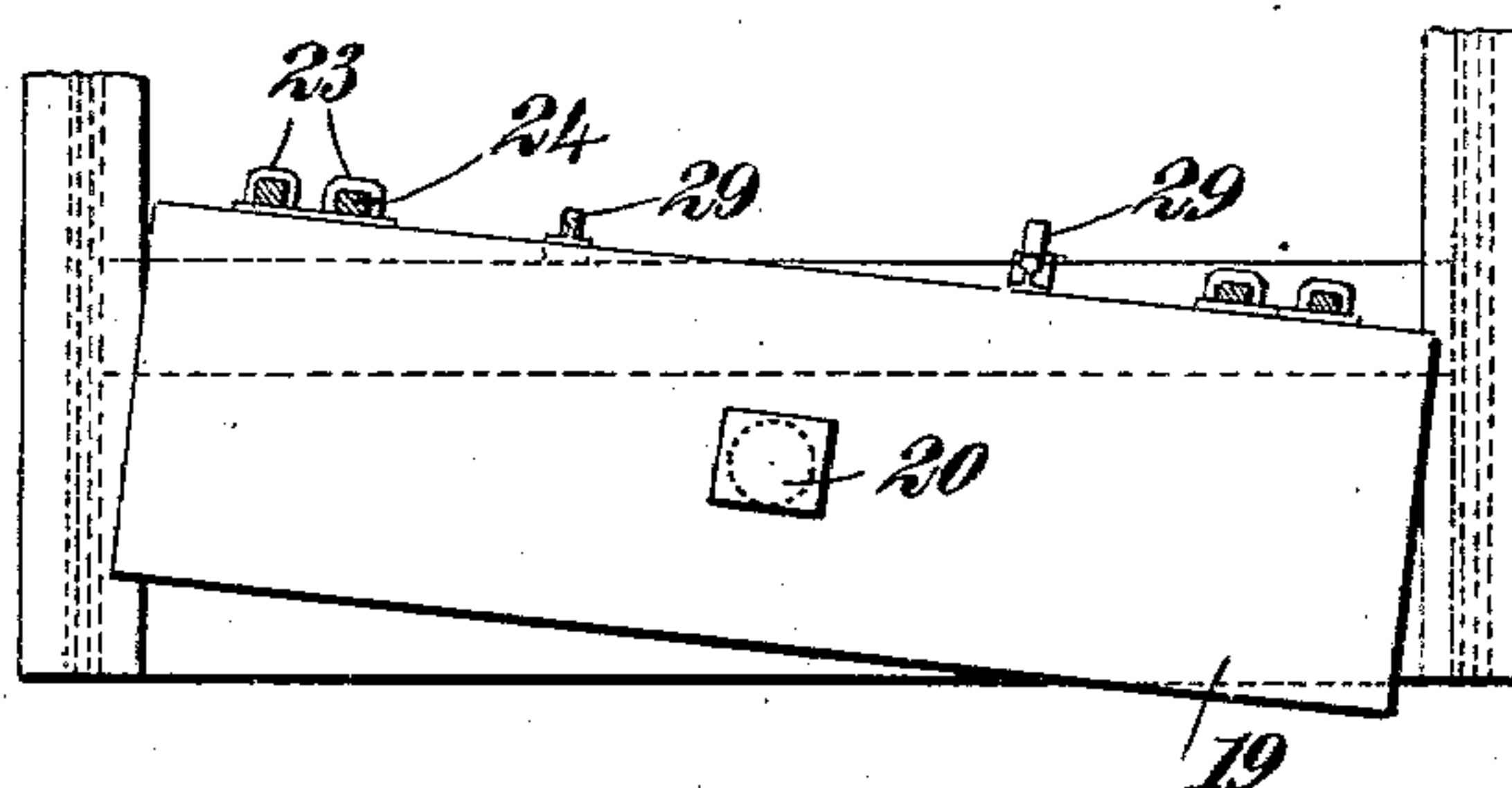


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ARLINGTON HUMPHREY MALLERY, OF NEW YORK, N. Y.

TRANSFER-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 743,901, dated November 10, 1903.

Application filed February 7, 1903. Serial No. 142,317. (No model.)

To all whom it may concern:

Be it known that I, ARLINGTON HUMPHREY MALLERY, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Transfer-Bridge, of which the following is a full, clear, and exact description.

This invention relates to improvements in bridges for transferring railway-cars from floats to docks or from docks to floats, an object being to provide a bridge so constructed and arranged that it will at all times practically maintain an even balance, and, further, to provide a simple means for securing the bridge to a boat or float whereby no torsional strain will be imparted to the bridge through the rocking motion of the float.

I will describe a transfer-bridge embodying my invention and then point out the novel features in the appended 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 plan view of a transfer-bridge embodying my invention. Fig. 2 is a section on the line *xx* of Fig. 1. Fig. 3 is an end elevation partly in section. Fig. 4 is a plan view of the front frame. Fig. 5 is a sectional view of a rocking member with which the float is designed to engage, and Fig. 6 is a front view thereof.

I have here shown the bridge as consisting of two sections arranged side by side operating one independently of the other; but in some instances a greater number of sections may be employed.

Arranged at the water end or at the end of the bridge designed to be engaged with a float is a frame which consists of the pillars 1, connected at the top by a skeleton beam 2. These pillars and the beam 2 are preferably for strength and economy of material made of steel angles and plates. Arranged to swing vertically at one end with relation to the frame are the bridge-sections A B, and the opposite ends of these bridge-sections are hinged to a dock or the like in the usual manner. Mounted in the opposite side portions 3 4 of the section A are sheaves 5 6. A cable or chain 7 is attached at one end to the beam

2 and then passes around the sheave 5 and thence upward over a single sheave 8, mounted in the beam 2. From this sheave 8 the cable extends over a double sheave 9 and thence to a connection with a weight 10, movable up and down in the pillar. A similar cable or chain 11 is secured at one end to the beam 2 and passes around the sheave 6 and thence over the double sheave 9 to connection with the weight 10. Mounted in opposite sides of the bridge-section B are sheaves 12 13, and a cable 14 is attached at one end to the beam 2, passes around the sheave 12, then over a single sheave 15 in the upper portion of the frame or in the beam 2, and then over a double sheave 16 to connection with a weight 17. A cable or chain 18 is connected at one end to the beam 2, passes around the sheave 13, and then over the double sheave 16 to the weight 17. By this arrangement of cables and weights the bridge-sections are practically evenly balanced and held from undue rocking motion as cars are passing on or off the same.

Pivoted to the outer end of each bridge-section is a rocking member consisting of a frame 19. At its center the rocking member 19 has a pin or pintle 20, which extends longitudinally of the bridge-sections and has bearings in plates 21 22. This pin may be either square at one end and round at one end or round throughout. On the upper side of each swinging member are loops or keepers 23, called "toggle-pockets," designed to receive bolts or rods 24, called "toggle-bars," extended from the deck of the float 25, these devices being designed to hold the float from lateral motion with relation to the end of the bridge. By this arrangement of the rocking member it is obvious that the float may be rocked freely from side to side, of course carrying with it the rocking member 19, without imparting any torsional or like strain on the bridge-sections.

On each rocking section 19 are rail-sections 26, designed to be placed in alinement with the rails 27 on the float. Arranged between the ends of the main tracks or rails of the bridge-sections and the rail-sections 26 are vertically-swinging track or rail sections 29. These sections 29 are mounted to swing on rods or hinges 30, and obviously they will

move up and down with the rocking movement of the member 19 and prevent the dropping of the car-wheels from one track-section to another.

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

10 1. The combination with a transfer-bridge of an end member mounted to rock in vertical plane and transversely of the bridge.

2. The combination with a transfer-bridge, of a member centrally pivoted to one end of the bridge so as to rock on a horizontal axis, and means for locking a float to said member.

15 3. The combination with a swinging transfer-bridge, of a member pivoted on one end of the bridge to rock on a horizontal plane, rail-sections on said member, and vertically-swinging rail-sections between said first-named rail-sections and the main sections of the bridge.

20 4. In a transfer-bridge, an end framing, a vertically-swinging bridge-section, sheaves in the upper portion of the frame, cables or

chains extended from the opposite sides of the bridge-section over said sheaves, and a weight with which both of said cables or chains connect. 25

5. In a transfer-bridge, a vertically-swinging platform or bridge-section, a counterbalance for the platform or bridge-section, a member mounted to rock on one end of the platform or bridge-section, the pivot thereof being extended lengthwise of the bridge, and keepers on the top of the rocking member for receiving bolts carried by a float. 30 35

6. A transfer-bridge and a member attached to the end thereof, the said bridge and member having a relative rocking motion in vertical plane and transversely of the bridge. 40

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARLINGTON HUMPHREY MALLERY.

Witnesses:

JNO. M. RITTER,

C. R. FERGUSON.