

No. 635,788.

Patented Oct. 31, 1899.

J. MACPHAIL.  
WEIGHT EQUALIZER FOR HARVESTERS.

(Application filed Sept. 2, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

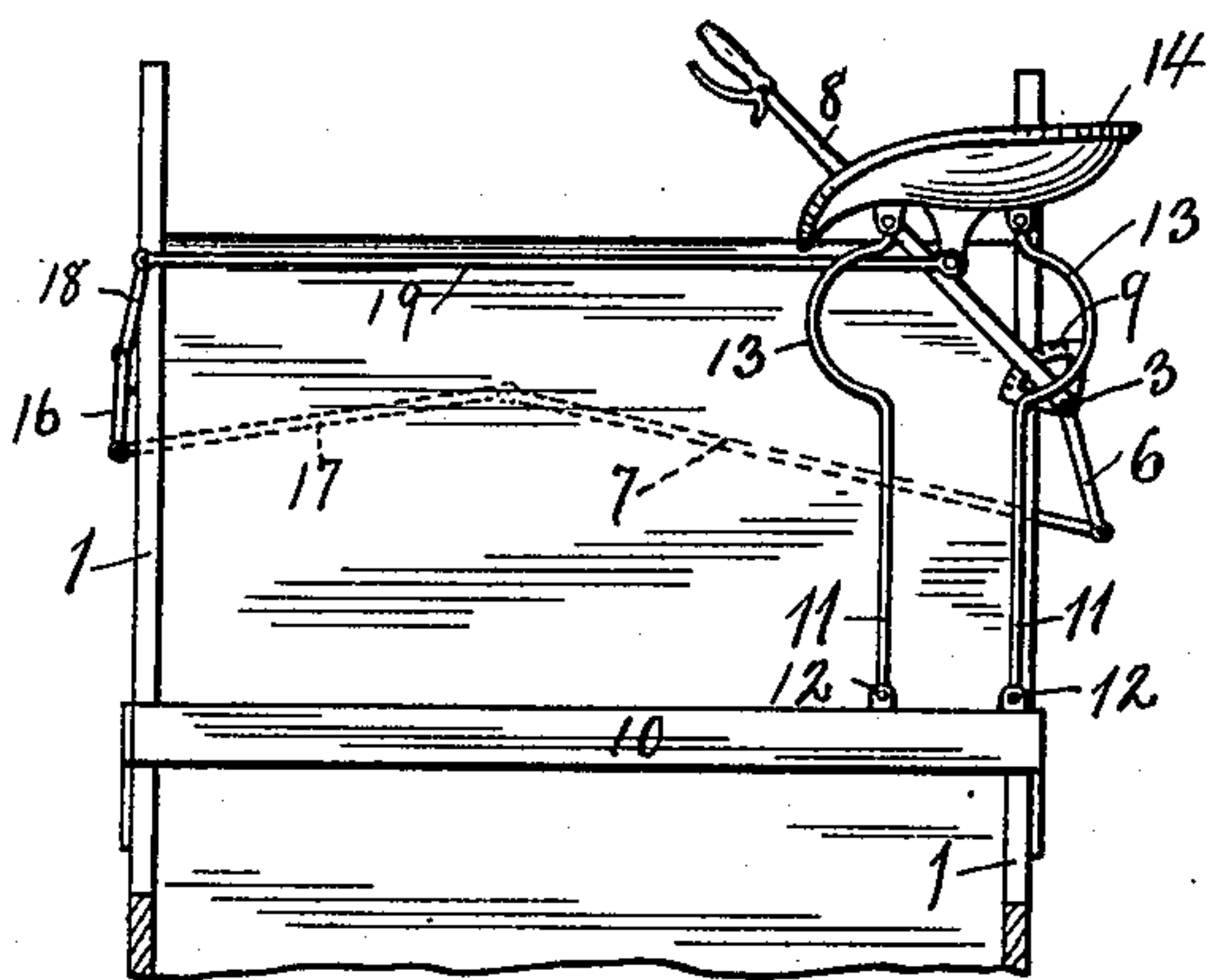
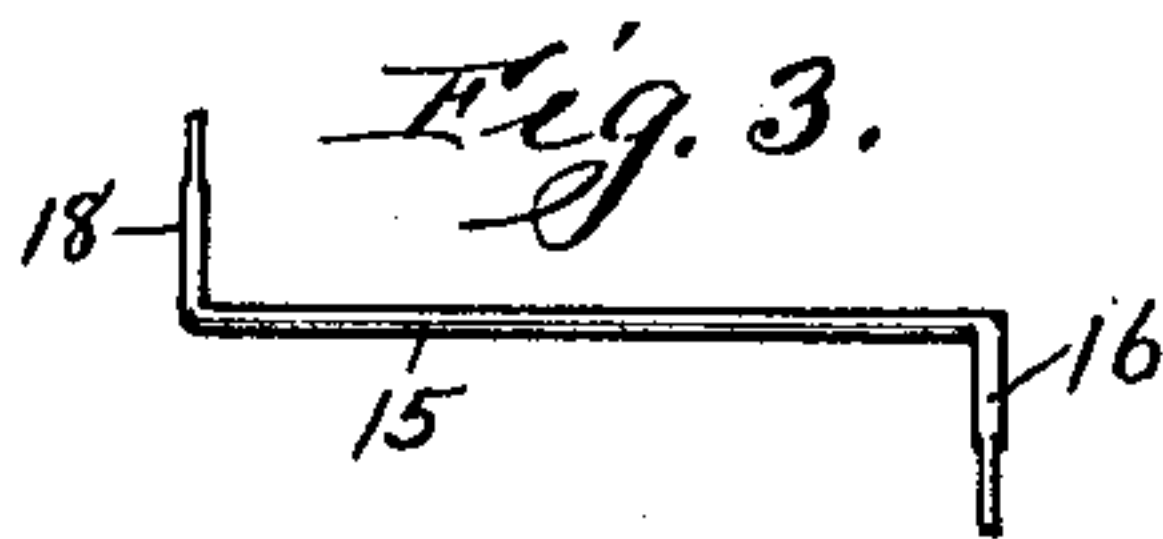
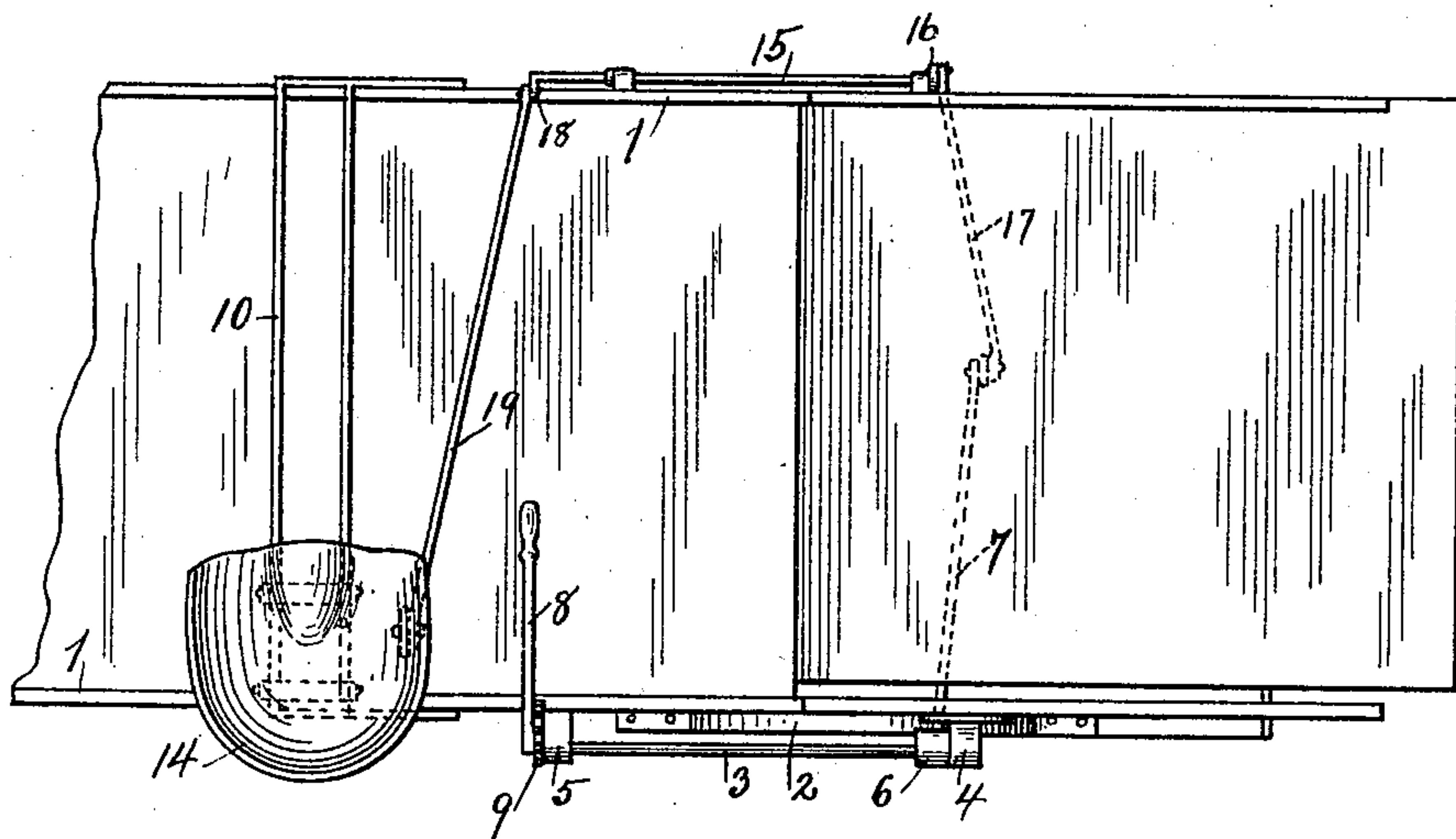


Fig. 2.



Witnesses:

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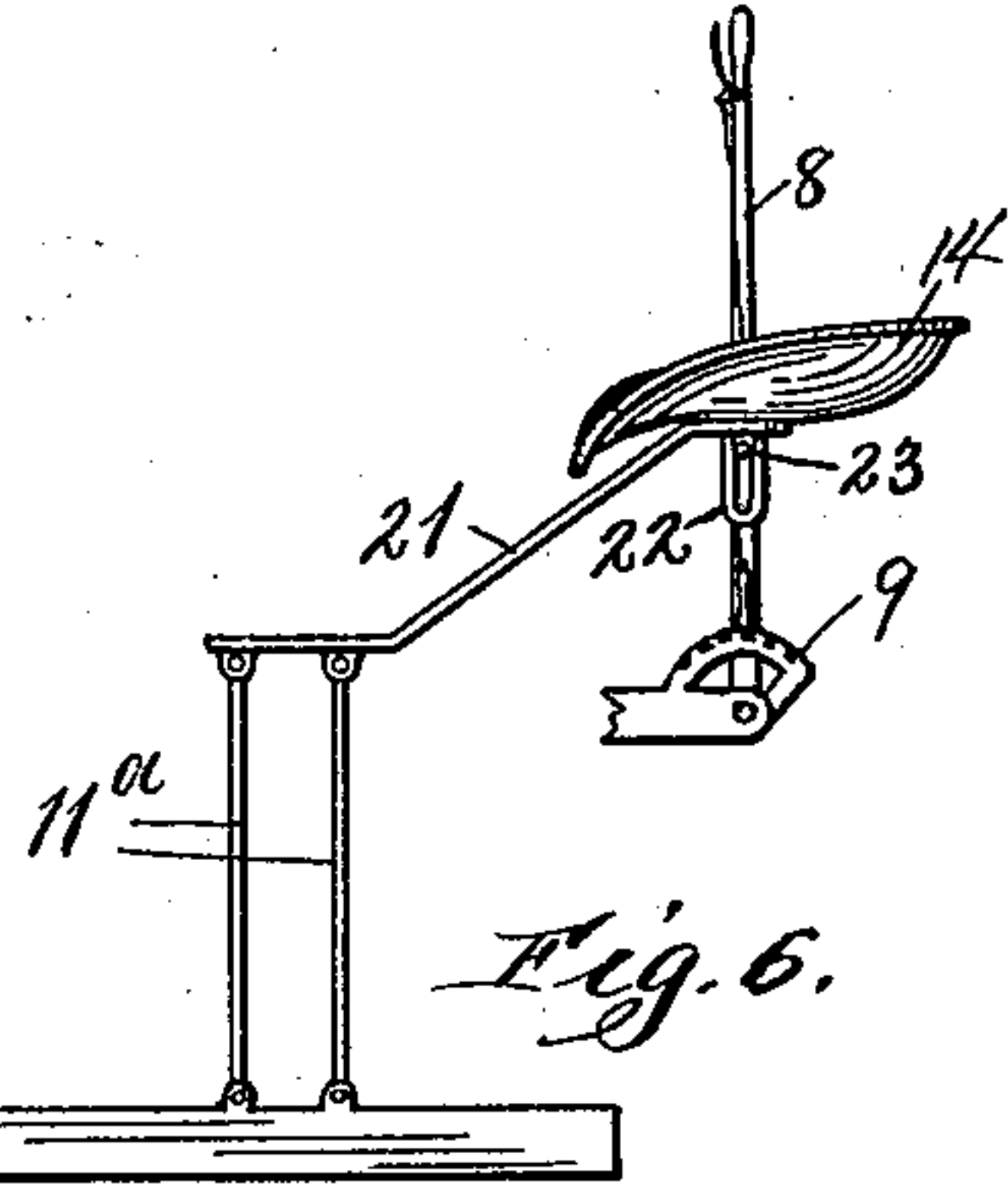
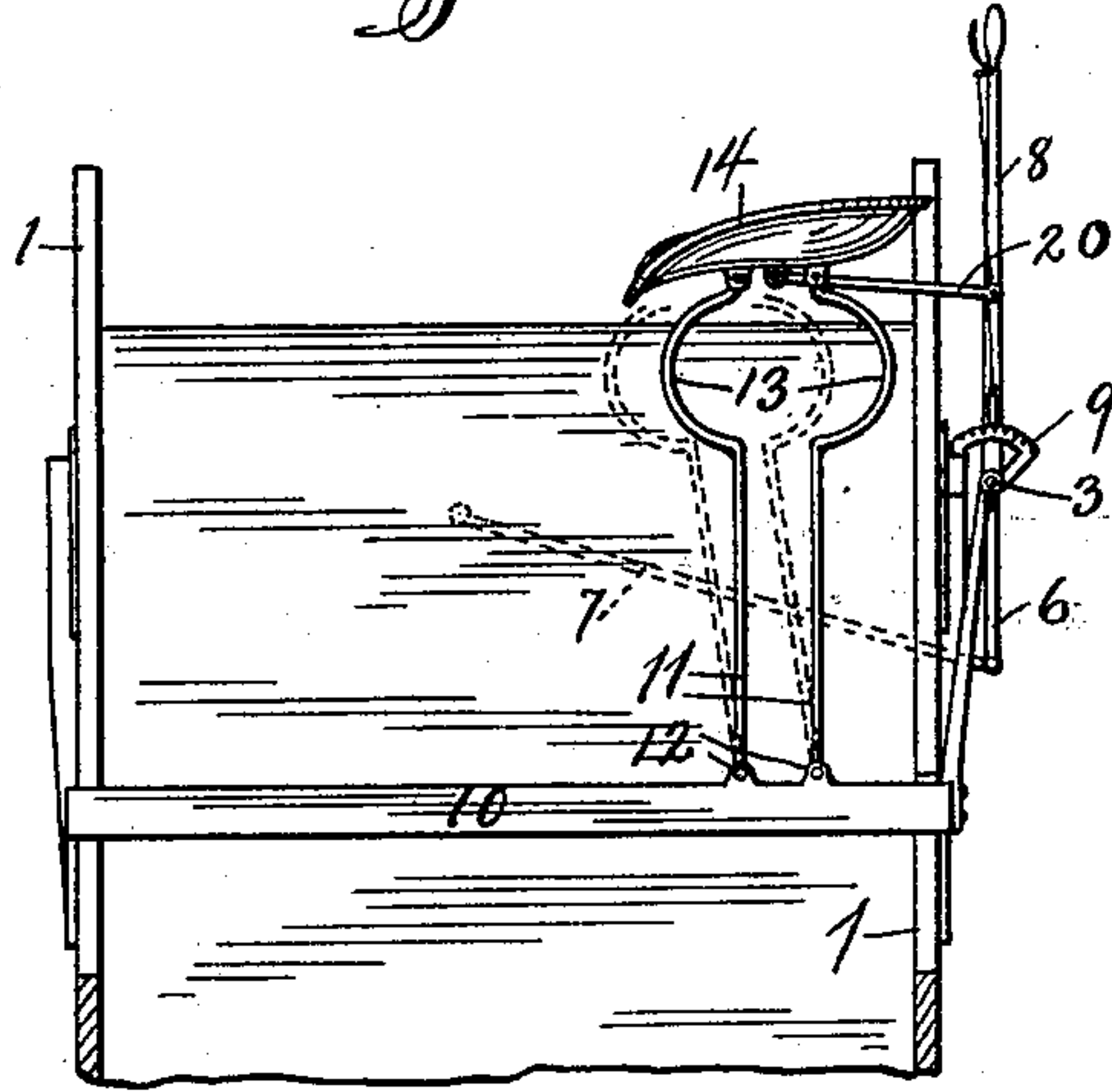
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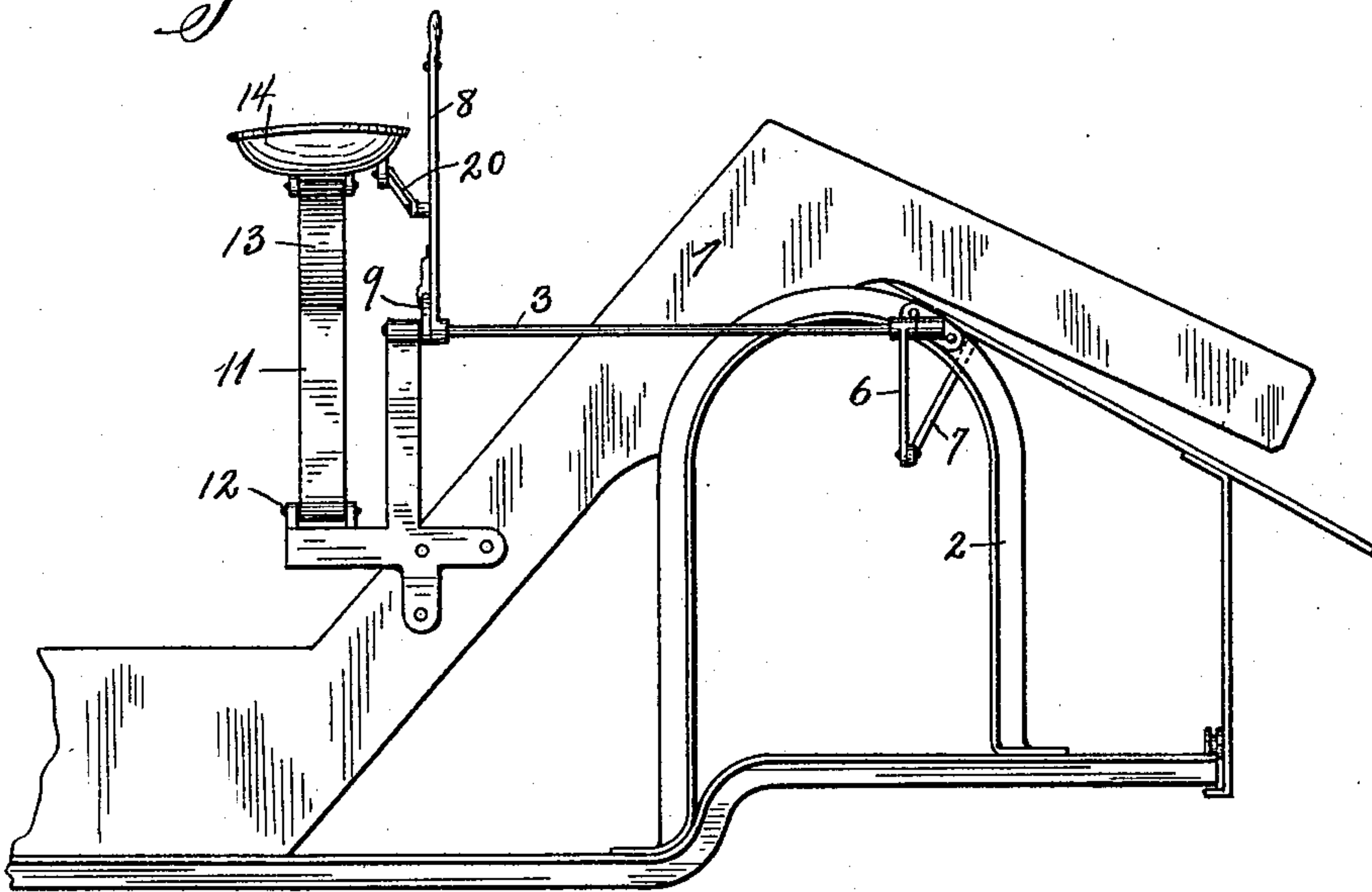
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2 Sheets—Sheet 2.

*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

JAMES MACPHAIL, OF BLUE ISLAND, ILLINOIS, ASSIGNOR TO THE PLANO MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

## WEIGHT-EQUALIZER FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 635,788, dated October 31, 1899.

Application filed September 2, 1898. Serial No. 690,074. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MACPHAIL, a citizen of the United States, residing at Blue Island, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Weight-Equalizers for Harvesters, of which the following is a specification.

My invention relates particularly to harvester weight-equalizers; and its object is to provide simple and efficient means for changing the position of the driver's seat in an automatic manner upon the shifting or adjustment of the binding mechanism, whereby the equilibrium may be maintained in the harvesting-machine.

In the drawings, Figure 1 is a side elevation of a portion of a harvester, showing my device attached thereto; Fig. 2, a plan view thereof; Fig. 3, a detail of a part thereof; Fig. 4, an elevation of a modified form of construction; Fig. 5, a rear elevation thereof, and Fig. 6 a side elevation showing a modified form of connection between the shifting-lever and seat.

The object of my invention being to shift the driver's seat simultaneously with the movement of the binding mechanism, it is obvious that a connection between the seat and either the binding mechanism direct or the adjusting-lever may be adopted. In Figs. 1 and 2 the direct connection with the binder is shown, while in the remaining figures connection is had with the adjusting-lever.

The elevator-frame 1 and the elevator-supporting frame 2 may be of the usual and well-known construction and form no part of my present invention. Likewise any suitable mechanism for shifting the binder may be employed; but for convenience I have illustrated a binder-shifting mechanism which may be adopted. This mechanism may be clearly understood from an examination of Fig. 5. A horizontal shaft 3 bears in suitable journals 4 and 5 and is provided with a crank-arm 6, on whose free end is secured the rod 7, which is connected to the binder at the under side of the deck in any suitable manner. The shaft 3 is provided with a lever-arm 8 within convenient reach of the driver and having

the usual quadrant or sector 9 to hold the lever in adjusted position.

Upon the rail 10 of the harvester parallel bars 11 are pivotally mounted in bearings 12, which bars are preferably curved, as at 13, to give suitable spring action. The seat 14 is mounted on the upper ends of the bars, all of which parts, owing to the pivotal mounting of the bars, are capable of being shifted to a position on either side of the vertical. In the drawings the position forward of the vertical position as assumed by the bars is illustrated by dotted lines.

Upon the front portion of the elevator-frame 1 or in any other suitable location is mounted a shaft 15, having at one end a crank-arm 16, connected by a link 17 with the binding mechanism. The other end of the shaft carries a crank-arm 18, connected to the seat 14 in a suitable manner by means of a link or rod 19. Any other suitable actuating mechanism between the binder and seat may be adopted which will cause the pivoted seat to be shifted or rocked on its pivots.

It will be readily apparent from the description already given that a movement of the lever will shift the binder and that its movement will be communicated simultaneously to the seat. When the binder is adjusted forward on the machine, the seat will be shifted back to correspond, and thereby equalize the weight and maintain an equilibrium. When the binder is adjusted backward on the machine, the seat will be shifted forward. It is obvious that other connections between the pivoted seat and the binder may be adopted without departing from the spirit and scope of my invention and claims.

In Figs. 4 and 5 is shown a modified form of construction in which the direct connection between the binder and seat is dispensed with and a connection made direct between the adjusting-lever 8 and the seat by means of a connecting rod or link 20. Other methods of connecting the lever and seat may be adopted, such as the construction shown in Fig. 6, wherein the seat is carried on one end of a support 21, whose lower end is attached to the upper end of the upright parallel bars 11<sup>a</sup>. A slotted bar 22 depends from the seat and



receives a pin 23 on the lever-arm or on an arm or member connected thereto.

Although I have described more or less precise forms and details of construction, I do not wish to be understood as limiting myself thereto, as I contemplate changes in form, the proportion of parts, and the substitution of equivalents, as circumstances may suggest or render expedient and without departing from the spirit of my invention.

I claim—

1. In a harvester, the combination, with the binder and its shifting mechanism, of a seat, similar parallel bars supporting the seat upon their upper ends and pivoted on the harvester to rock in a vertical plane in the line of draft, said bars being curved at 13 in the direction of such line of draft, and a connection between the shifting mechanism and said seat.

2. In a harvester, the combination, with the binder, of similar parallel bars pivoted on the harvester to rock in a vertical plane in the line of draft, said bars being curved at 13 in the direction of such line of draft, a seat supported on the upper ends of said bars, a quadrant device, a connection between the quadrant device and the binder and a connection between the seat and such device.

3. In a harvester, the combination of binder-shifting mechanism comprising a shaft 3, a crank-arm 6, a rod 7 between the crank-arm and binder, a lever 8 connected to the shaft,

similar bars 11 pivoted to the rail 10 of the harvester to rock in a vertical plane in the line of draft, a seat upon the bars, a shaft 15, a crank-arm 16 on the shaft, a connecting-rod 17 between the binder and arm 16, a crank-arm 18 and a connecting-rod 19 between the seat and arm 18.

4. In a harvester, the combination, with the binder and its shifting mechanism, of the stationary seat-rail 10 of the harvester, a pair of bearings 12 located on the rail, parallel bars 11 pivotally mounted in said bearings and arranged in tandem in the line of draft of the harvester, said bars being straight at the lower portion but curved at 13 at the upper portion, a seat on the top free ends of the bars and a connection between said shifting mechanism and said seat.

5. In a harvester, the combination of parallel pivoted bars 11 curved as at 13, a seat 14 thereon to rock in a vertical plane in the line of draft, binder-shifting mechanism comprising a shaft 3, crank-arm 6, rod 7 connected thereto and to the binder, a lever-arm 8, a quadrant device 9, a shaft 15 having crank-arms 16 and 18, a connection 17 between the binder and the arm 16 and a connection 19 between the seat and the arm 18.

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Witnesses:

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