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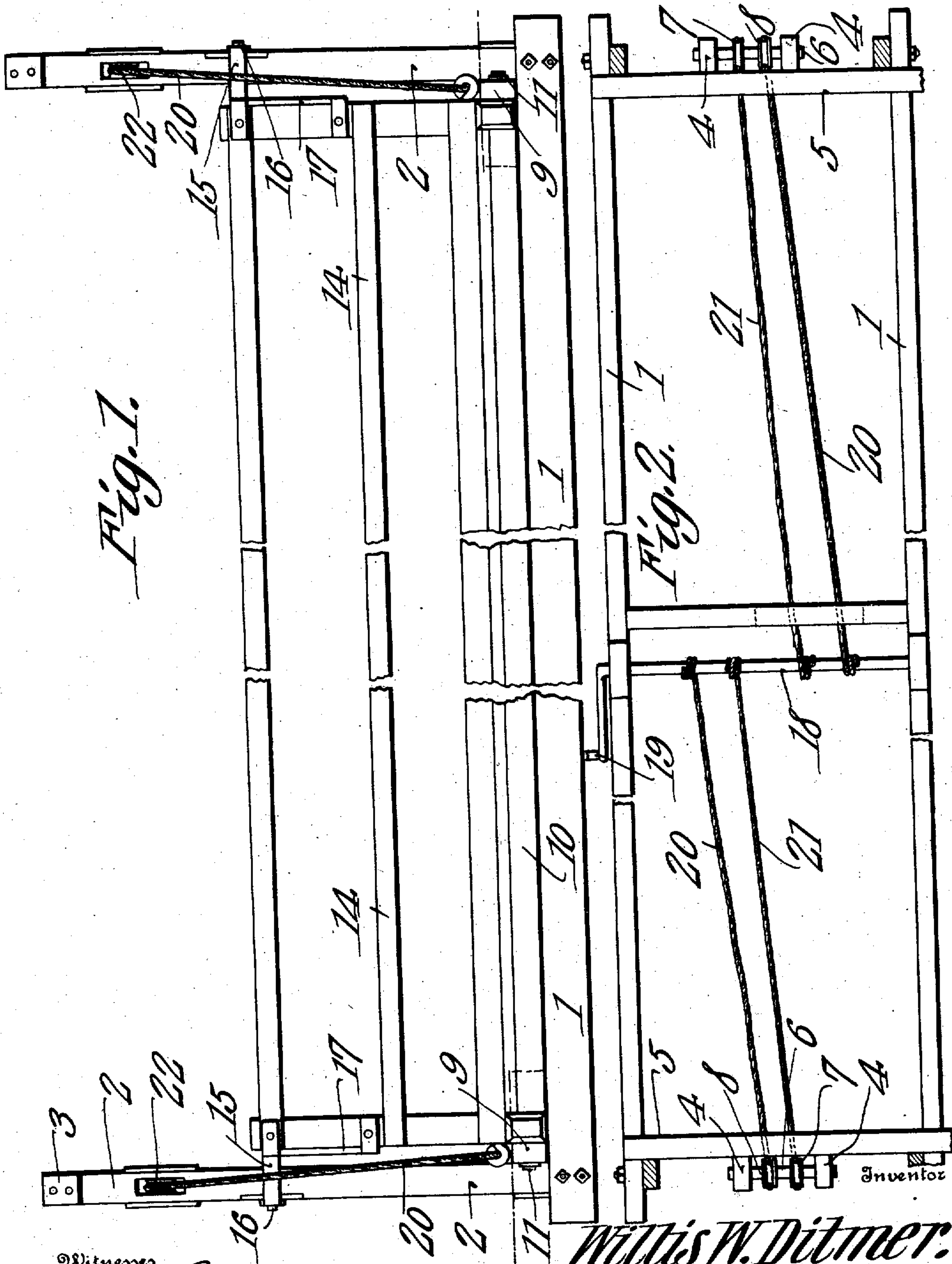


Fig. 1.

Fig. 2.

Witnesses

E. J. [Signature]
Robert D. Lawson

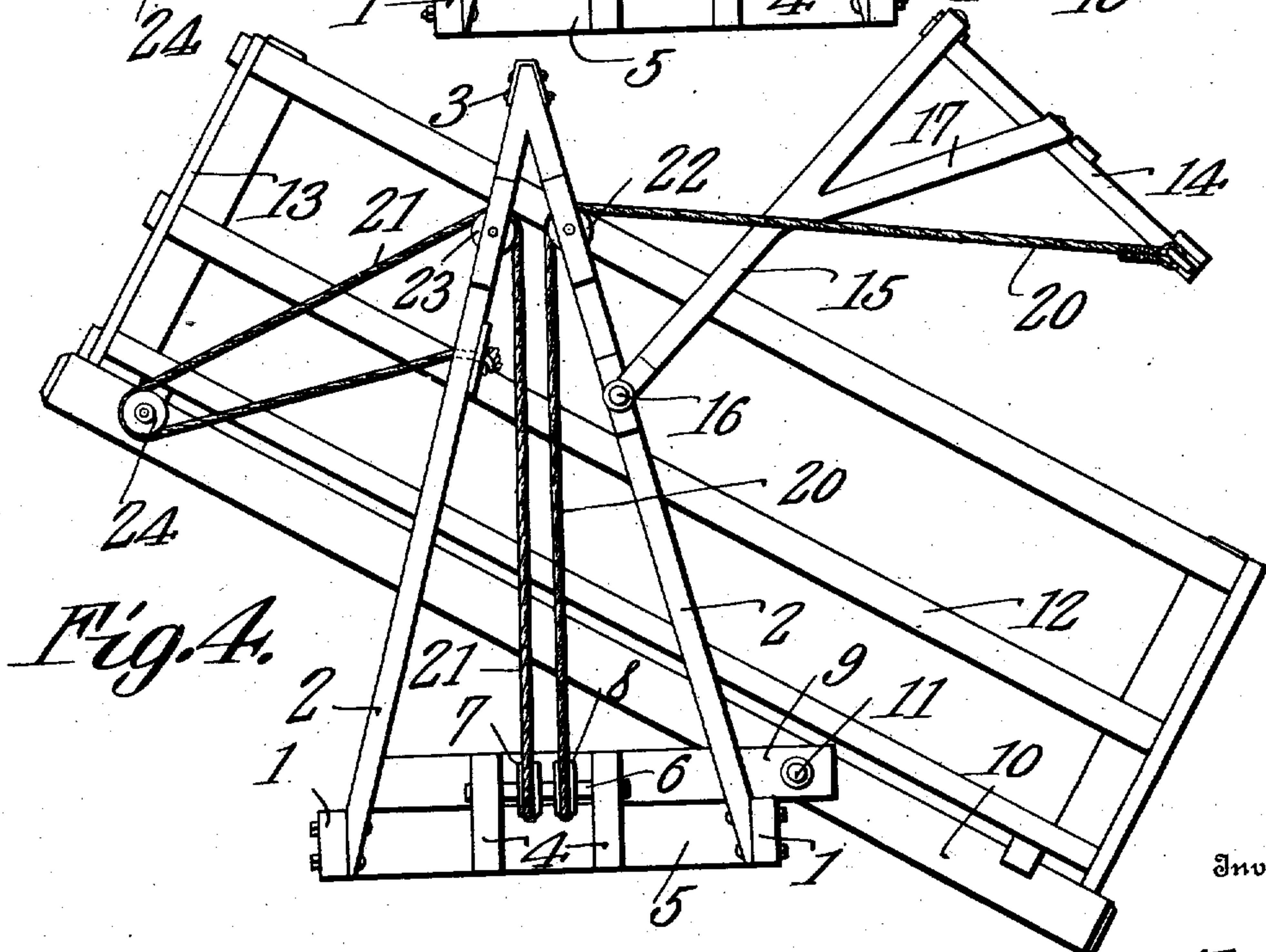
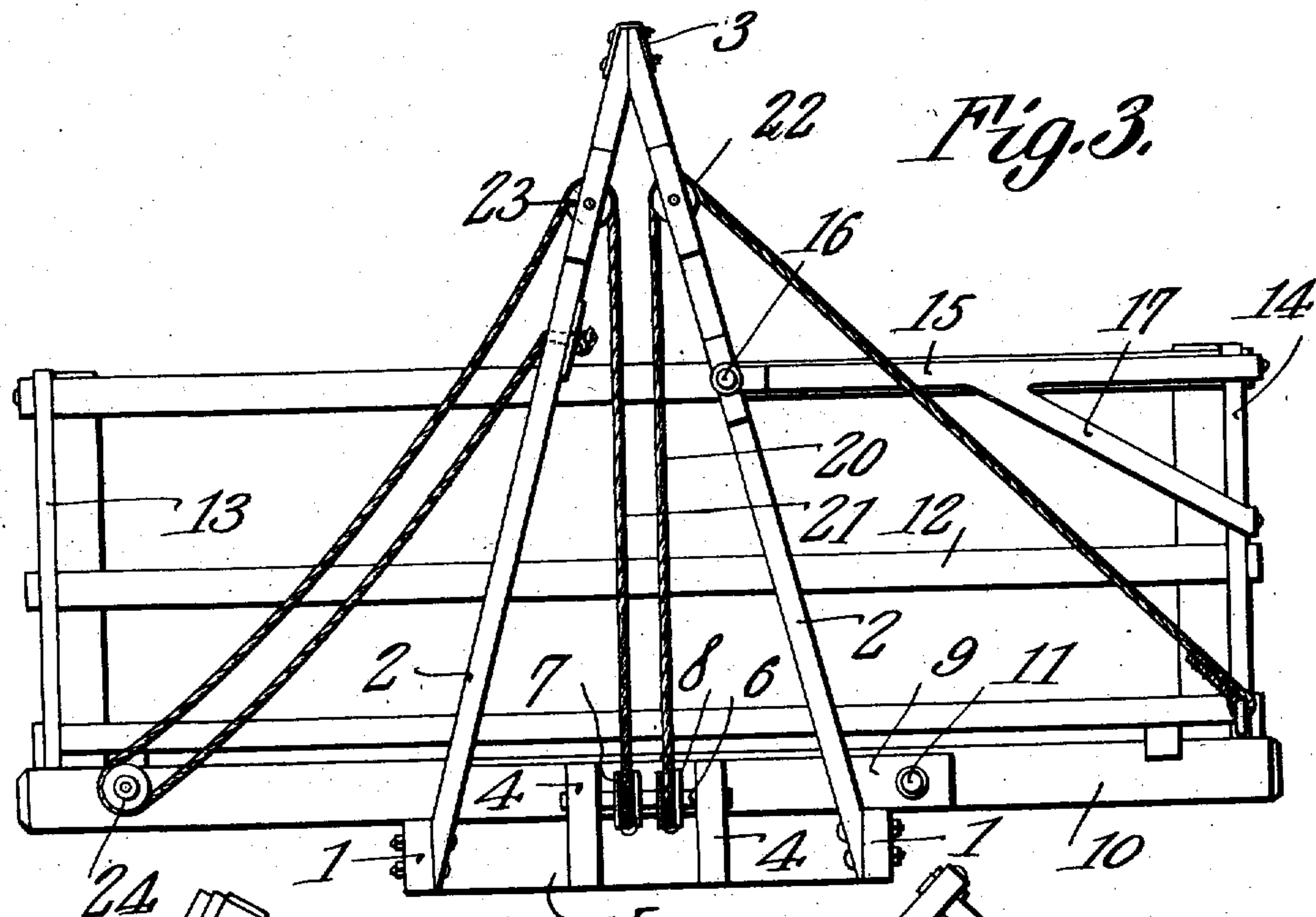
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W. W. DITMER.
DUMPING WAGON BACK.
APPLICATION FILED OCT. 28, 1909.

Patented Mar. 21, 1911.
2 SHEETS—SHEET 2.

987,121.



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UNITED STATES PATENT OFFICE.

WILLIS WHEELER DITMER, OF BARTLETT, NORTH DAKOTA.

DUMPING-WAGON RACK.

987,121.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed October 26, 1909. Serial No. 524,684.

To all whom it may concern:

Be it known that I, WILLIS W. DITMER, a citizen of the United States, residing at Bartlett, in the county of Ramsey and State of North Dakota, have invented a new and useful Dumping-Wagon Rack, of which the following is a specification.

This invention relates to dumping wagons or racks and its object is to provide a simple structure of this type the body of which is designed to be tilted laterally so as to discharge the load at one side of the vehicle.

Another object is to provide a device of this type having a side panel designed to be elevated prior to the dumping of the body whereby the contents of the body can be discharged without hindrance.

A still further object is to provide simple mechanism mounted upon the vehicle and which can be operated in any preferred manner for the purpose of elevating the movable side panel and tilting the wagon body when it is desired to discharge the load.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings, Figure 1 is a side elevation of the body of a vehicle embodying the present improvements. Fig. 2 is a plan view of the sills and of the actuating mechanism carried thereby, the standards being shown in section. Fig. 3 is an end elevation of the parts shown in Fig. 1. Fig. 4 is a view similar to Fig. 3 and showing the positions of the parts during the dumping operation.

Referring to the figures by characters of reference 1 designates parallel longitudinally extending sills having upwardly converging standards 2 secured to the end portions thereof each pair of standards being held together at their upper ends in any preferred manner, as by means of caps 3. Brackets 4 extend outwardly from each of the end sills 5 which connect the longitudinal sills 1 and a shaft 6 is mounted within these brackets and supports sheaves 7 and 8. A laterally extending arm 9 is secured to each end sill and extends beyond the side of one of the longitudinally extending sills 1 and located between these arms 9 and bear-

ing on the longitudinal sills 1, is the bottom 10 of the wagon body. Trunnions 11 extend from the ends of this bottom 10 and bear within the arms 9, these trunnions being so located as to permit said bottom 10 to tilt downwardly across the outer face of the adjoining longitudinal sill 1. Any suitable forms of end panels 12 may be mounted upon the bottom 10 and a side panel 13 is fixedly secured upon one side of the bottom. The other side of the wagon body is provided with a movable panel 14 provided at its ends with arms 15. These arms extend from the upper ends of the front and rear portions of the panel 14 and are pivotally connected as at 16 to the adjoining standards 2, there being braces 17 for holding the arms 15 in fixed relation to the panel 14.

A shaft 18 extends transversely through the middle portion of the sills 1 and is provided at one end with a crank 19 or other suitable means whereby the same may be readily rotated. Two sets of ropes or cables 20 and 21 are secured to this shaft 18, the two sets of cables being extended in opposite directions from the shaft. Each cable 20 extends under a sheave 8 and thence upwardly and over a sheave 22 journaled within the upper portion of one of the standards 2, said cable being secured at its ends to the bottom portion of the movable side panel 14. The cable 21 of each pair extends under the sheave 7 and thence upwardly over a pulley 23 mounted within the other end standard 2, said cable being then extended partly around a sheave 24 which is journaled on the adjoining end of the bottom 10. The end portion of the cable 21 is then extended upward and secured to the standard 2 in which the sheave 23 is mounted. The arrangement of the cables is the same at both ends of the structure.

It is to be understood that when the parts are in their normal positions the bottom 10 of the vehicle body rests upon both of the sills 1 and the side panel 14 bears upon the bottom and closes the side of the body. It will also be seen that when the panel 14 is thus held in closed position, it will retain any load placed upon the rack and does not require the use of any special fastening devices to prevent it from opening when subjected to the outward pressure exerted by the load. The cables 21 are preferably slack under normal conditions while the cables 20 are taut. It will be seen therefore

that when the shaft 18 is rotated so as to wind the cables simultaneously, the cables 20 will pull upwardly on the side panel 14 and cause it to swing about the pivots 16 of arms 15 and after a sufficient upward movement of the side panel has been produced in this manner the cables 21 pull upwardly upon the sheaves 24 and cause the bottom 10 to tilt laterally. The contents of the wagon body will thus be discharged from the side thereof and under the panel 14. By unwinding the cables from the shaft 18 the foregoing operation will be reversed and the parts restored to their normal positions by gravity. It will be seen that the mechanism herein described is very simple in construction and will not readily get out of order and is advantageous because of the ease with which it may be actuated and the rapidity of the discharge of the contents of the body.

It is to be understood that it is unnecessary to employ a normally slack cable as the movable panel is so mounted relative to the dumping body as to move out of the path of said body during the dumping operation and swing back to its normal position as the body returns to its initial position.

What is claimed is:

1. A device of the class described including longitudinally extending sills, standards supported thereby, a wagon body normally bearing on the sills and pivotally connected thereto, a side panel pivotally connected to the standards, and means for tilting the body to discharge a load and for simultaneously elevating the panel above the lowered portion of the body.

2. A device of the class described including longitudinally extending sills, standards supported thereon, a wagon body normally bearing on the sills and pivotally mounted, arms pivotally connected to the standards, a side panel fixed relative to the arms, normally closing one side of the body, a winding device carried by the sills, and means actuated thereby for tilting the body laterally to lower one side thereof and for simul-

taneously elevating the panel of said lowered side.

3. A device of the class described including longitudinally extending sills, laterally extending arms thereon, a wagon body pivotally mounted between and connected to the arms, standards supported by the sills at the ends of the body, arms pivotally connected to the standards, a side panel fixed relative to the arms and normally closing one side of the body, and means for swinging one side of the body and the panel of said side simultaneously in opposite directions.

4. A device of the class described including a supporting structure, a wagon body tiltably mounted thereon, standards upon said structure, arms pivotally connected to the standards, a side panel fixed relative to the arms and normally closing one side of the body, a winding device, a flexible connection between said device and one of the standards, a flexible connection between said winding device and the movable side panel, means upon the body and movably engaging the flexible device which is secured to the standard, and means for guiding said flexible devices during the operation of the winding device for simultaneously swinging one side of the body downwardly and the panel of said side upwardly.

5. A device of the class described including a main structure, a rack tiltably mounted thereon, a panel constituting a closure for one side of the rack, means for simultaneously swinging one side of the rack downwardly and swinging the panel of said side upwardly to open the side of the rack, and connections between the panel and main structure for holding said panel against lateral movement relative to the rack.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIS WHEELER DITMER.

Witnesses:

J. ELMER FREEBERG,
FRANK B. FREEBERG.