

No. 612,993.

Patented Oct. 25, 1898.

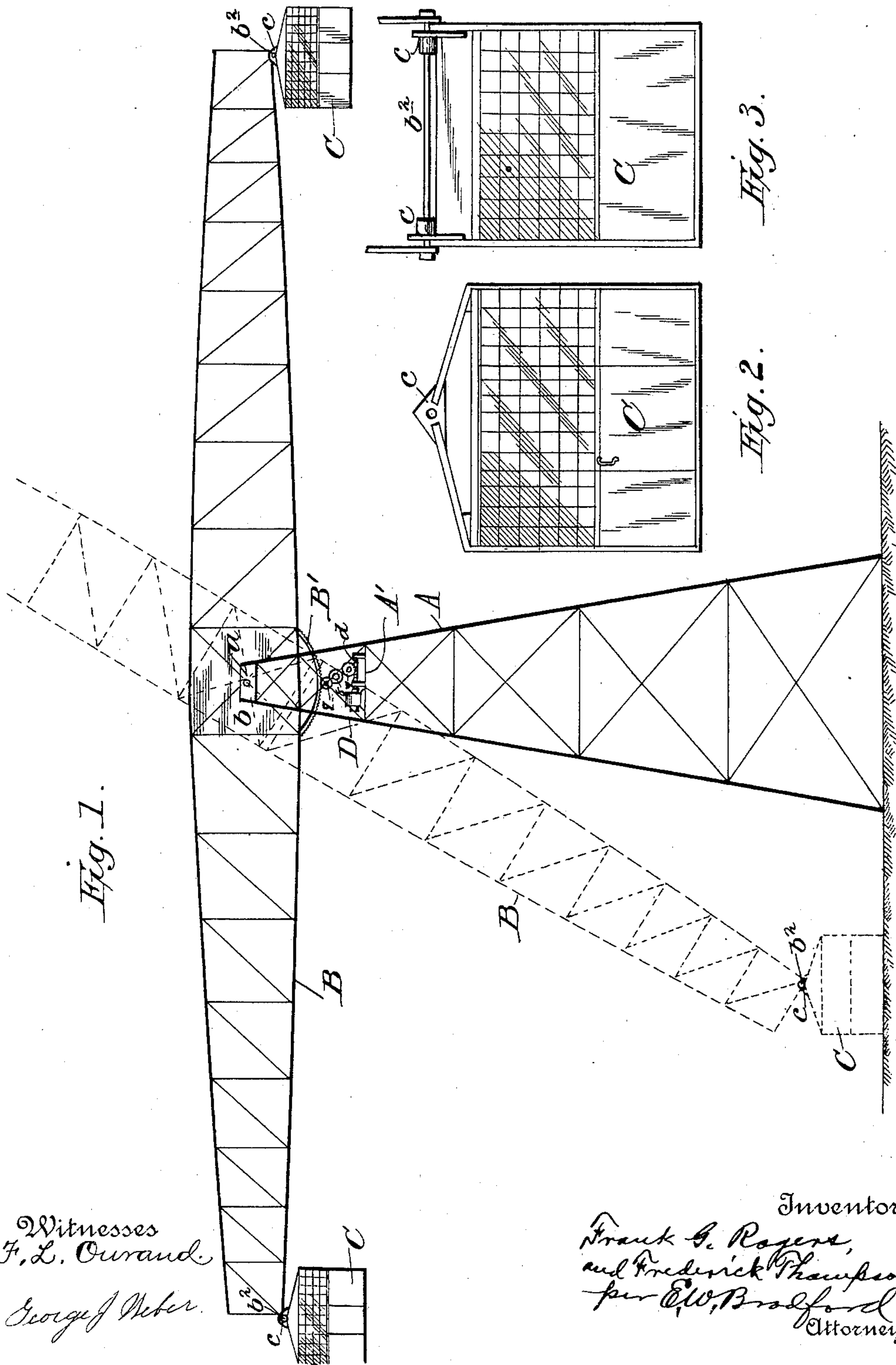
F. G. ROGERS & F. THOMPSON.

SEESAW.

(Application filed Oct. 30, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

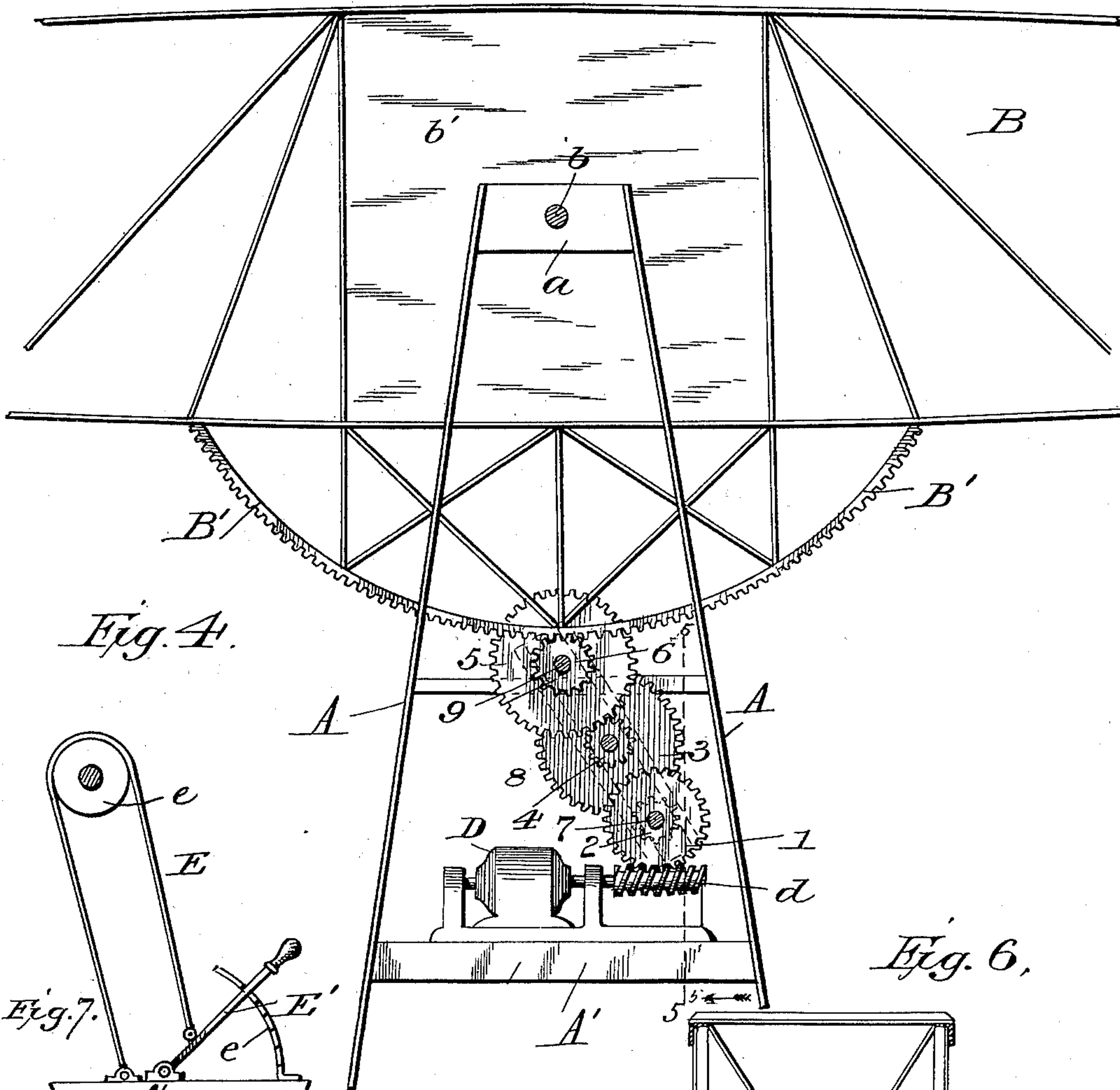


Fig. 4.

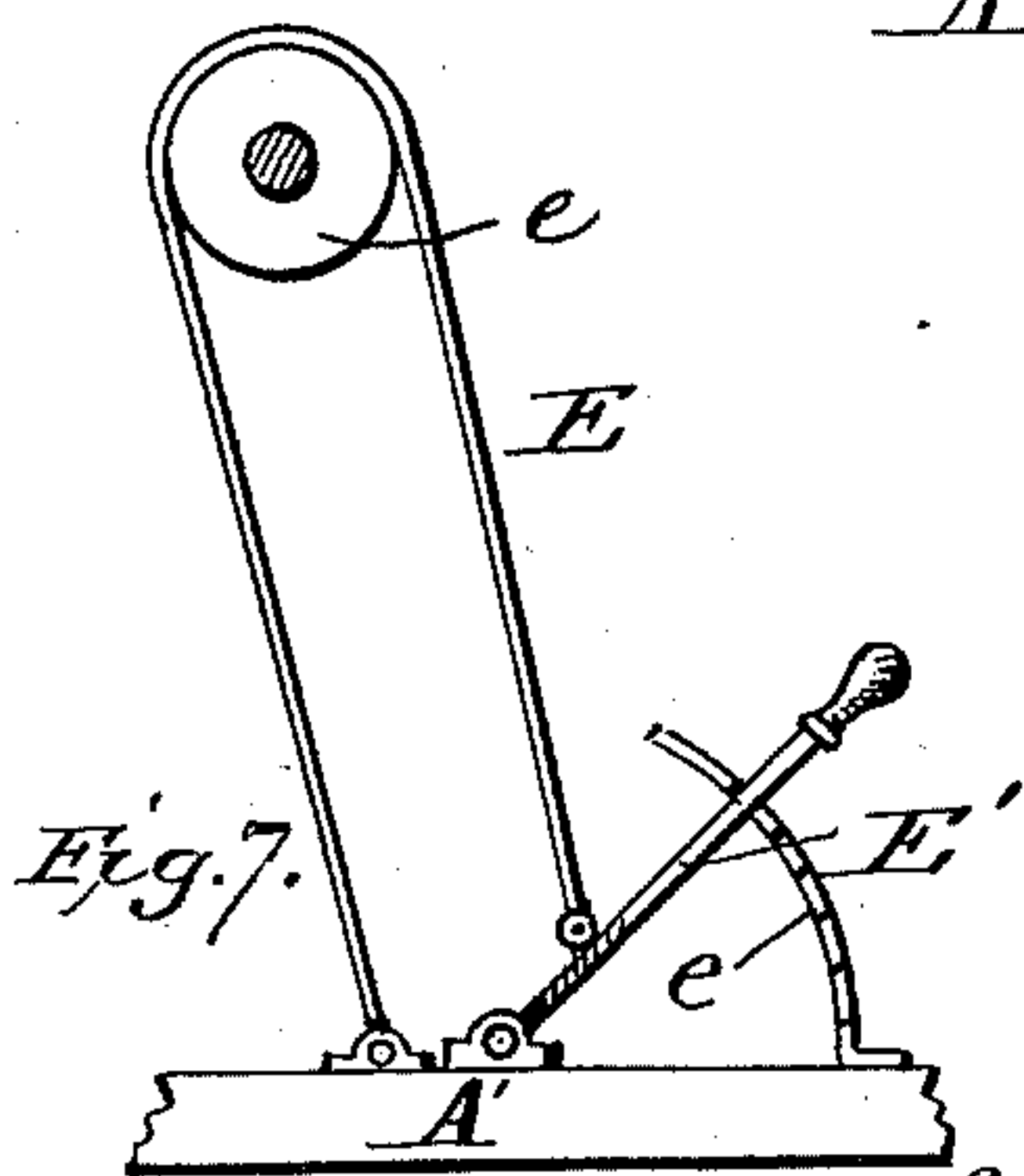
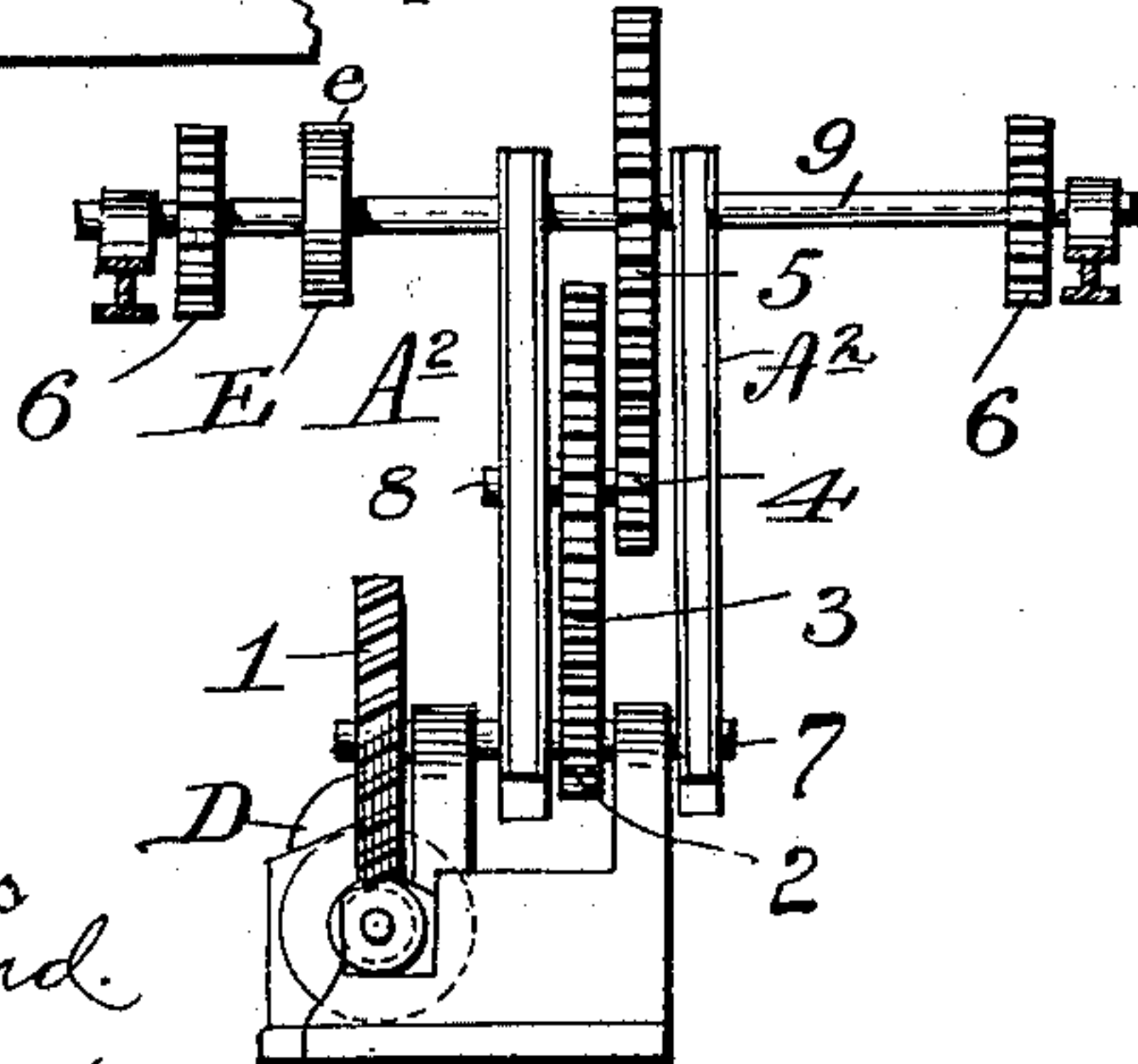


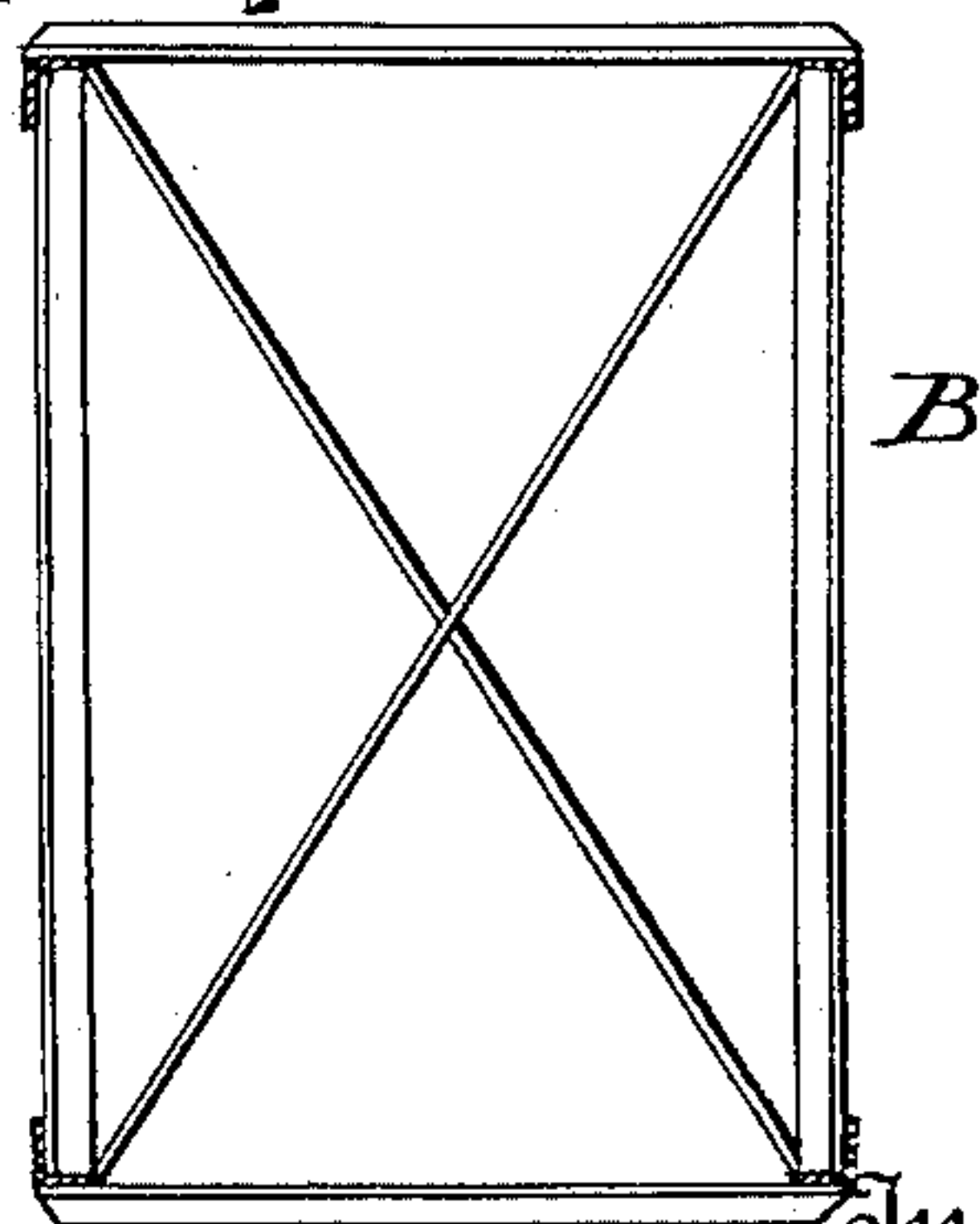
Fig. 7.

Fig. 5



Witnesses
F. L. Ourand.
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Fig. 6.



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UNITED STATES PATENT OFFICE.

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SEESAW.

SPECIFICATION forming part of Letters Patent No. 612,993, dated October 25, 1898.

Application filed October 30, 1897. Serial No. 656,911. (No model.)

To all whom it may concern:

Be it known that we, FRANK G. ROGERS and FREDERICK THOMPSON, citizens of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Seesaws; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our said invention relates to various improvements in the construction and arrangement of parts of power-driven seesaws and in the arrangement and method of operation of the mechanism, whereby a seesaw is provided of unusual dimensions capable of carrying a large number of people at one time with safety and which may be easily and positively controlled at all times, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters and figures of reference indicate similar parts, Figure 1 shows a side elevation of a seesaw constructed in accordance with our said invention, the pivoted beam being shown in full lines in a horizontal position and by dotted lines in one of its extreme tilted positions; Fig. 2, an end elevation of one of the cars pivoted to each end of said beam; Fig. 3, a side elevation of the same; Fig. 4, a detail view of the central portion of the apparatus on an enlarged scale, as shown in Fig. 1; Fig. 5, a view looking in the direction indicated by the arrows from the dotted lines 5 5 in Fig. 4, showing the driving-gear in edge elevation; Fig. 6, a cross-section through the beam, and Fig. 7 a view showing the controlling-brake in side elevation.

In said drawings the portions marked A represent the tower or pier which supports the apparatus; B, the beam; C, the cars; D, the motor or engine, and E the brake for controlling the apparatus.

The tower A and beam B are each preferably built of iron beams, braced and trussed similar to bridge construction to secure the

desired size and strength of parts. They may be built of other material and in a different manner, of course, if preferred, any tower and pier or beam of the desired size and required strength being suitable for the purpose. In the construction of an apparatus which we have already built the tower is seventy-five feet high, the beam one hundred and sixty feet long, and each car is built to accommodate twenty-five passengers. These dimensions may be varied to suit; but the construction generally is intended for an apparatus of such unusual proportions adapted to serve to elevate the passengers to an altitude useful as a point for observation as distinguished from a seesaw intended as a means of amusement for children. Said tower A is constructed at its top to support heavy journal-boxes *a* for the beam-shaft and has a platform *A'* near its top to accommodate the motor and driving machinery and operator. Said beam B is formed as before indicated and has a shaft *b*, extending across from one side thereof to the other, firmly secured in heavy plates *b'*, built into the center of its structure. On the under face of each side iron a toothed segment *B'* is secured, the circle bounding its face being struck from the center of said shaft *b* in the journal-box *a*.

The cars C are preferably of iron framework with glass sides and arranged for the convenience of the passengers. Directly above the center of each car, on each side thereof, a journal-box *c* is built into the frame structure, and by means of said boxes said cars are pivotally hung on shafts *b*², which extend across the extreme lower corners of the beam rigidly secured in its structure.

The motor D is preferably an electric motor, as shown, of the required power. Its shaft is extended and formed into a worm-gear *d*, the several parts being journaled and secured in suitable bearings and supports on the platform *A'*. A system of gear-wheels 1, 2, 3, 4, 5, and 6 connect said worm-gear and the segments *B'*, and thus transmit power to the beam and produce the rocking motion. Said several gear-wheels are mounted on suitable shafts 7, 8, and 9, which are journaled in boxes provided therefor on the frame, and on the supports *A*², provided for the interme-

diate bearings. The top shaft 9 extends entirely across and has two of the gears 6, one on each end, arranged to mesh with the two segments B'. Said gears are preferably arranged as shown, 1 being a large gear meshing with the worm; 2, on the same shaft, a small gear meshing with 3, a large gear on the next shaft; 4, a small gear on the same shaft with 3 and meshing with 5, a large gear on top shaft 9, and the gears 6 being each small and meshing with said segments. By this arrangement, as will be readily understood, the power is transmitted to great advantage and in a manner to give the beam a slow and steady motion, which enables it to be easily controlled and operated with safety. The electric power is supplied from any convenient source and controlled in the ordinary way.

The brake E is a friction-band mounted to surround or partly surround a wheel *e* on the shaft 9 and is controlled and operated through a lever E', which engages with a notched bar *e'* to hold it as desired in the usual way. By its use the operator is enabled to stop and hold the beam and cars carried thereby in any desired position for any length of time desired, and in the event of the breakage of any part of the machinery is enabled to stop the beam and prevent the injury of the occupants by a sudden fall.

The operation of our said invention is as follows: The several parts being connected and adjusted, as shown and described, the power being supplied to the motor, the worm is operated in the direction desired to bring down the car to be filled until it rests upon the ground or a suitable platform, as shown in dotted lines in Fig. 1. The car is then filled with passengers, its door closed, and the motor reversed, which operates to elevate said filled car and bring down the opposite end of the beam with the other car, which is then filled and the operation repeated continuously, the cars being alternately filled and emptied, the beam being held stationary by means of the brake E during the time the passengers are being loaded and unloaded. The

operator standing on the platform A' is enabled at all times to see all that is being done and control and operate the apparatus with ease and safety.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a seesaw, the combination, of a tower formed with journal-boxes on its top at the sides thereof, a beam mounted on a pivot-shaft the ends of which are mounted in said journal-boxes, a car hinged at a central portion of its top to swing down from each end of said beam, a motor or engine for driving said beam, gearing connecting said motor or engine with said beam, and the regulating and controlling devices, substantially as set forth.

2. In a seesaw, the combination, of the tower formed with journal-boxes on its top and a platform near its top, a beam mounted on a pivot-shaft journaled in said boxes, a car pivotally hung to each end of said beam at its top, a motor mounted on said platform, toothed segments on the under side of said beam, gearing connecting said motor and said segments, and a controlling-brake, substantially as set forth.

3. In a power-driven seesaw, the combination, of the tower, the elevated platform A' thereon, the beam pivoted on the top of said tower, the cars pivotally hung to each end of said beam, the motor on said platform, toothed segments on the under side of said beam the radius of each running to the center of the pivots of said beam, the worm-gear *d* on the motor-shaft, the chain of gear for transmitting the power from said worm-gear to said segments, and the brake for controlling the apparatus.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK G. ROGERS.

FREDERICK THOMPSON.

Witnesses:

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