

No. 770,816.

PATENTED SEPT. 27, 1904.

J. G. MICHAELI.
HITCHING DEVICE.

APPLICATION FILED MAR. 25, 1904.

NO MODEL.

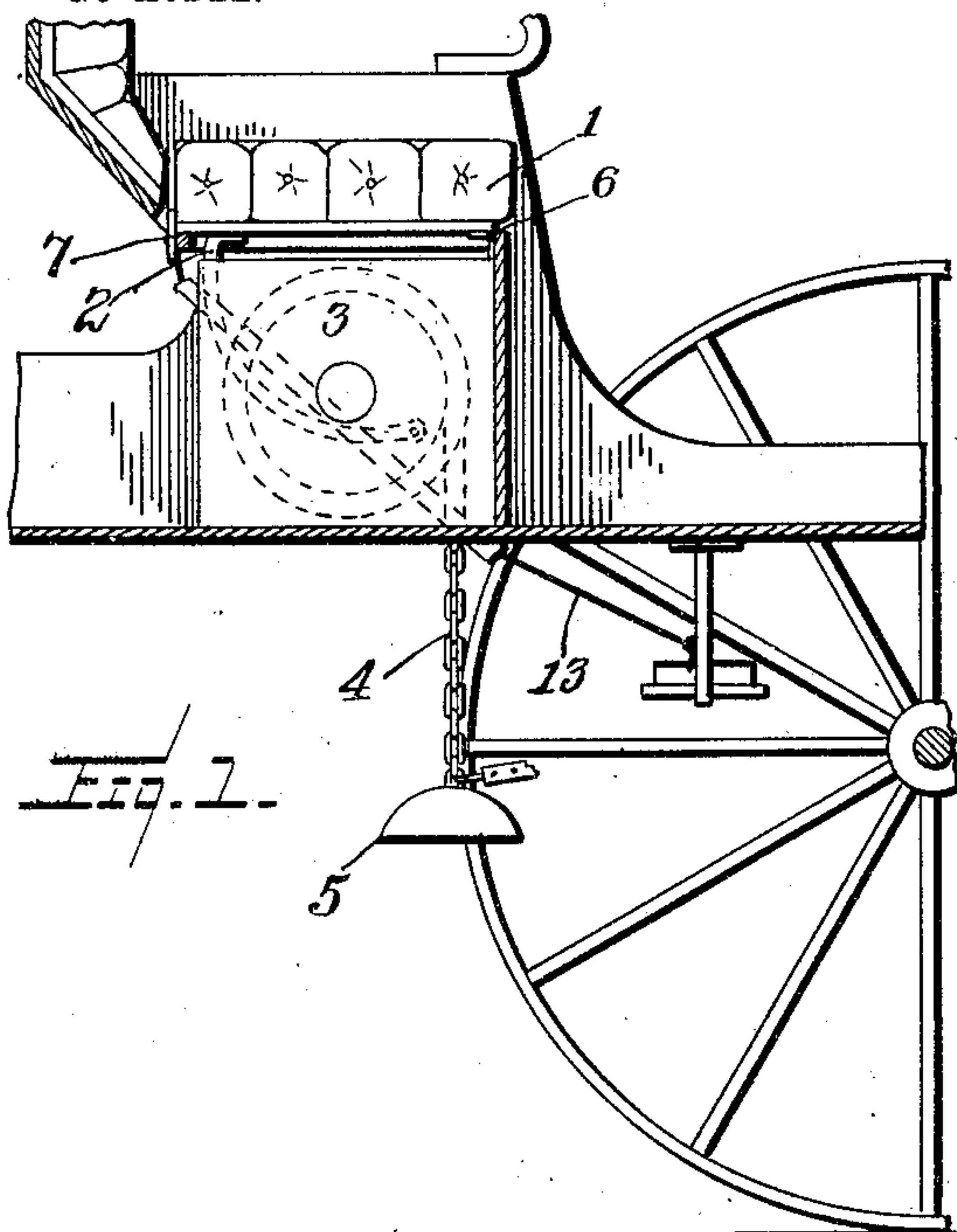


Fig. 1.

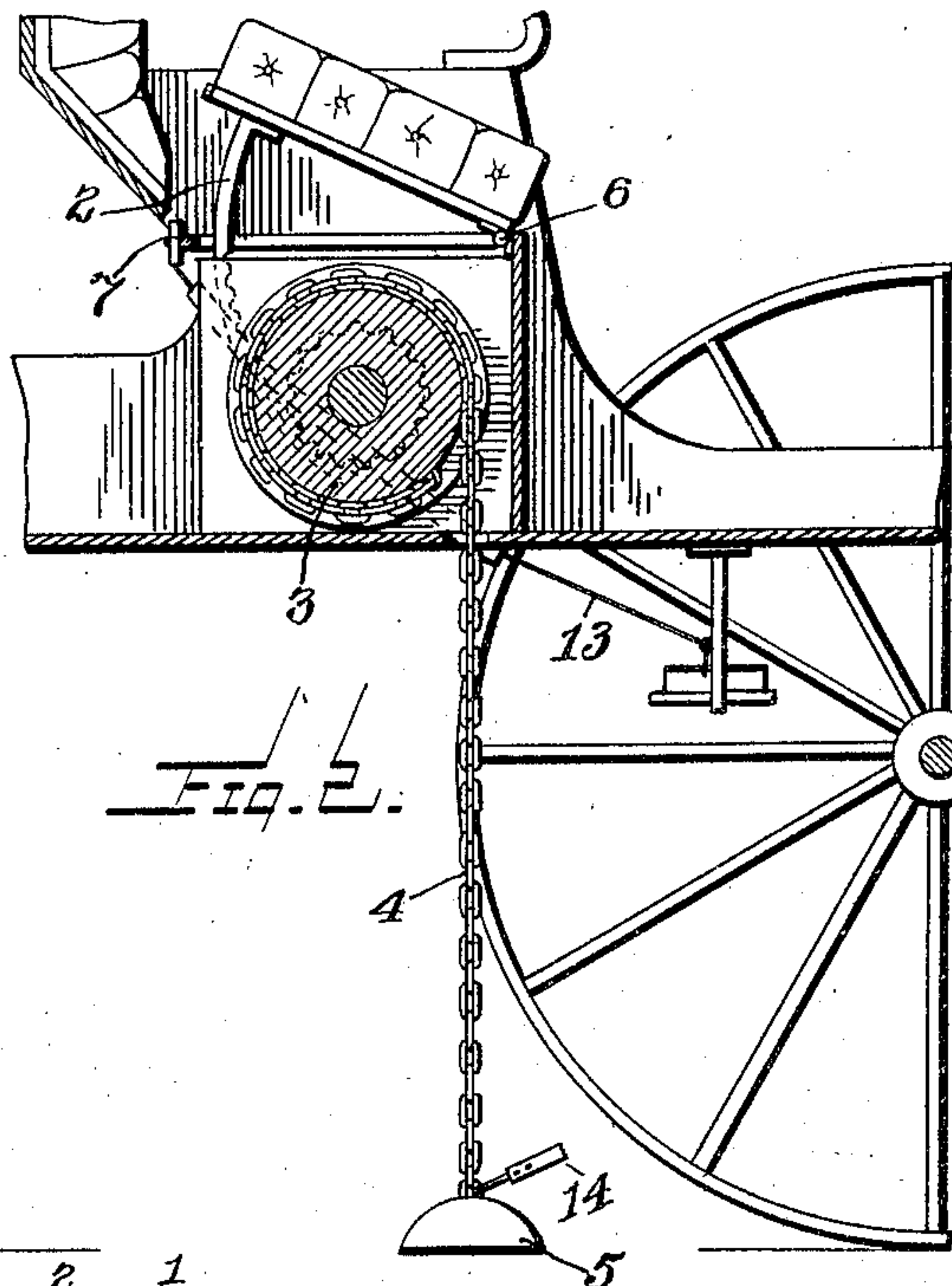


Fig. 2.

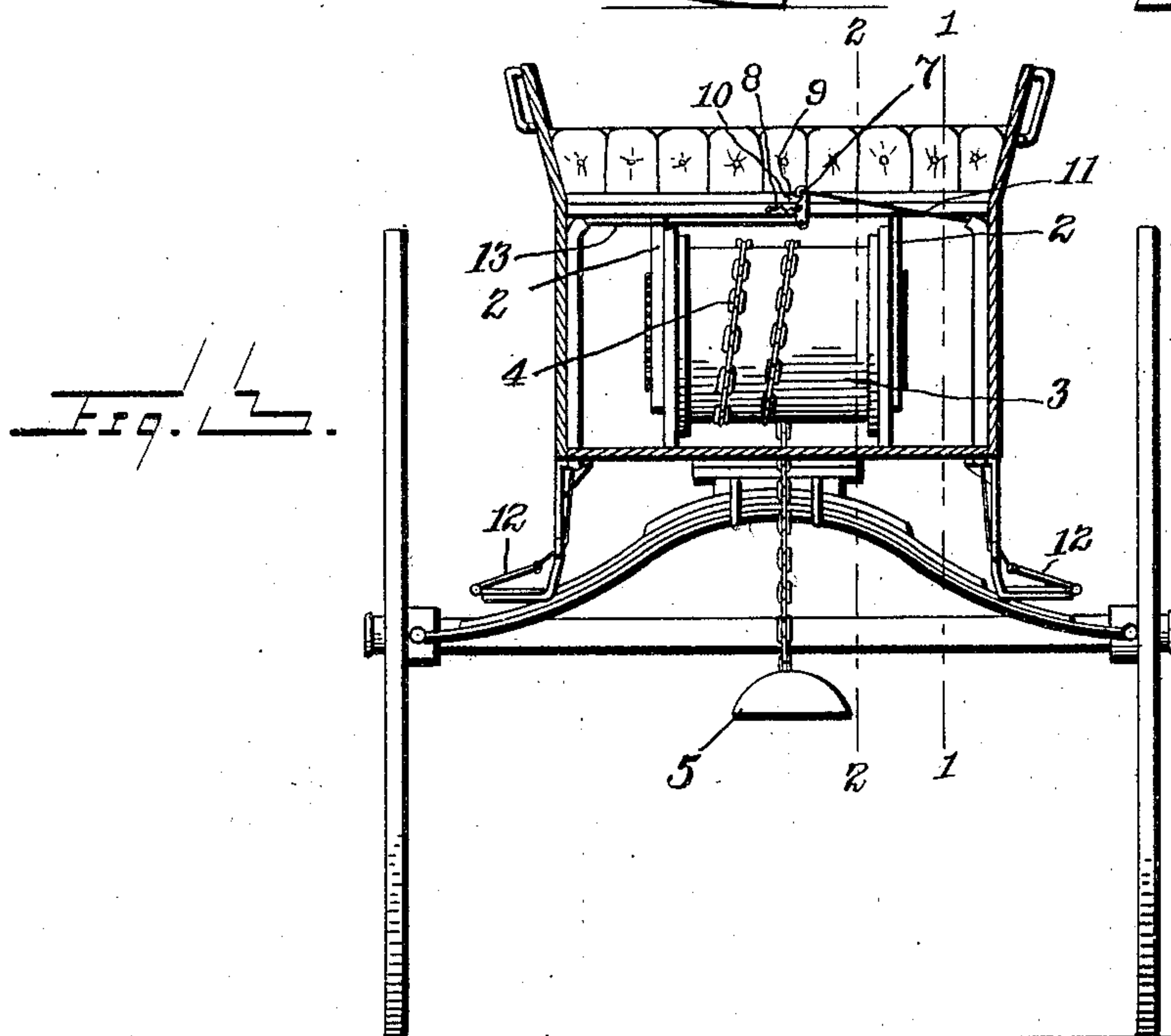


Fig. 3.

WITNESSES:
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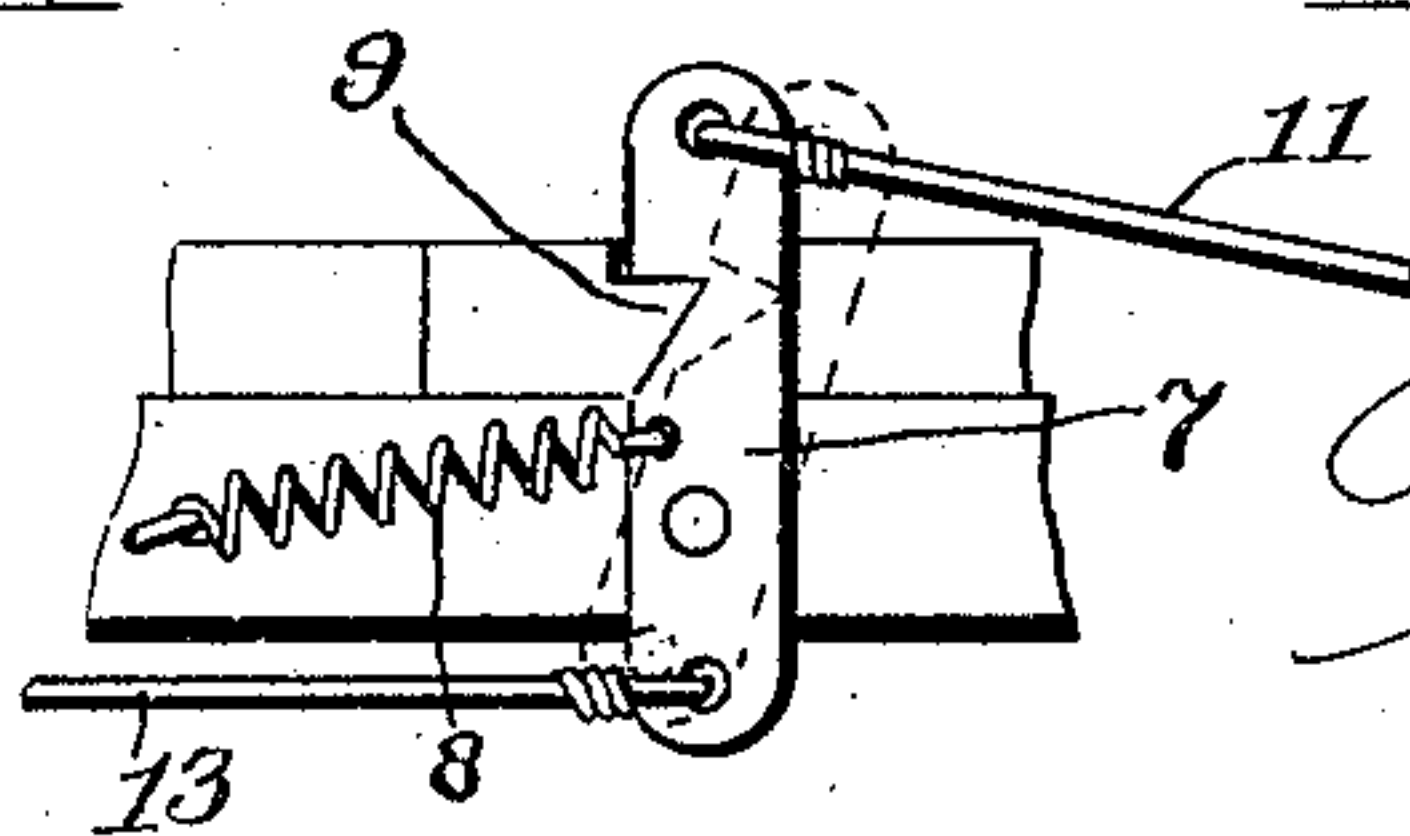


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN G. MICHAELI, OF DENVER, COLORADO.

HITCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 770,816, dated September 27, 1904.

Application filed March 25, 1904. Serial No. 199,953. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. MICHAELI, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Hitching Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to hitching devices, and more particularly to that class in which a drop-weight is employed, the object being to provide simple and effective means by which a drop-weight is automatically raised and lowered, thereby obviating the necessity of removing the weight from the vehicle-box of the vehicle to which my device is attached when it is desirable to use the same for hitching purposes and replacing it after unhitching.

A further object of my invention is to provide a device of the character described wherein the weight which is connected with the bridle or bit is deposited upon the ground coincident with the act of alighting from the vehicle by the occupant thereof, thus obviating the danger of runaways occurring before the hitching operation takes place.

Another object of my invention is to provide automatic means for elevating the weight and holding it in such elevated position when it is desired to unhitch and a means whereby the unhitching operation will not take place until the occupant of the vehicle has entered the same and is seated.

My invention serves the double purpose of providing means whereby danger from runaways taking place between the time of leaving the vehicle and hitching and between the time of unhitching and entering the vehicle is obviated.

The invention consists in the construction and novel combination and arrangement of the several parts hereinafter fully described, illustrated, and finally claimed.

In the drawings accompanying this specification and made a part hereof I have illustrated a preferred embodiment of my invention, and while it is obvious that certain modifications of form and arrangement of parts will suggest themselves to the skilled opera-

tor and mechanic such modifications come well within the spirit and scope of my invention as disclosed and claimed, and I do not, therefore, desire to be limited to the precise construction and arrangement shown.

In the drawings, Figure 1 is a sectional view of the device on lines 1 1 of Fig. 3. Fig. 2 is a sectional view on lines 2 2 of Fig. 3. Fig. 3 is a rear elevation of the device, partly in section. Fig. 4 is a detailed view of the latch.

Similar figures of reference refer to like parts in all the figures of the drawings.

1 designates a vehicle-seat, to the rear part of which and preferably underneath the seat two links 2 are secured. The lower ends of these links are pivoted on the ends of a drum 3, which is arranged to revolve on an axis beneath the seat. Secured to this drum is a chain or strap 4, to the lower end of which the drop-weight 5 is attached. The seat 1 is mounted on the seat-supporting frame by means of a hinge 6. On the rear of the frame is pivoted a latch 7, which is held in a vertical position by means of a spiral spring 8. This latch is provided with a notch 9, which is arranged to engage with a catch 10, secured to the back of the seat when the seat is in its normal position and resting on the frame which supports it. Secured to the top of the latch 7 is a cord 11, which is connected at the other end to a plate 12, which is hinged to the step of the vehicle, as shown. 13 designates another cord, which is secured to the bottom of the latch 7 and leads to the plate on the opposite step of the vehicle. 14 designates a hitching strap or rein which is secured to the drop-weight 5.

In Fig. 2 is shown a slightly-different form of my invention wherein the links 2 instead of being pivotally secured to the ends of the drum 3 are connected therewith by means of the gear-wheel 15, which is mounted either in the drum or at the ends thereof, the links being ribbed and the ribs engaging with the notches in the gear-wheel.

In operation the seat is retained in its normal position by means of the notch 9 engaging with the catch 10, which projects from the rear of the seat. The spiral spring 8 holds the latch 7 in a vertical position when the

same is not actuated by means of the cords 11 and 13. The chain or strap 4 is secured to the drum 3 and holds the weight 5 in an elevated position when the seat is resting upon the seat-supporting frame, as shown in Figs. 1 and 3. When a person about to leave the vehicle steps upon the plate 12, which in its normal or operative position is slightly raised, the plate is depressed, and this action pulls the cord or chain secured to the plate, and thus imparts force to the latch 7, pulling it out of its vertical or upright position, bringing the notch 9 out of engagement with the catch 10. The tension of the weight 5 on the chain or strap 4 throws the drum into operation and causes it to revolve upon its axis. The links 2 being pivotally mounted on the drum are set in operation and raise the rear of the seat, and the weight 5 descends to the ground, and the strap or rein 14 being secured thereto and leading to the bit forms a hitching connection. When the person is about to reënter the vehicle and steps upon the plate, it merely descends and throws the latch out of its vertical or upright position, and as soon as the plate is released from the weight thereon the latch resumes its upright position by means of the tension of the spiral spring thereon. When the occupant of the vehicle is seated, the seat is depressed into its normal position, and by means of the links 2 the drum is put into operation as the seat descends, and the strap or chain 4 being secured to the drum is wound thereon and the weight is drawn into an elevated position, where it remains until the party leaving the vehicle releases the catch by the means already described.

Having thus described my said invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat, of a weighted chain or strap, a drum rotatably mounted beneath the seat, and means connected with the seat whereby the drum may be rotated, and the weight elevated.

2. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat, of a drum rotatably mounted beneath the seat, a weighted chain or strap secured to the drum and adapted to be wound thereon, and means for automatically releasing the seat from its normal position whereupon the drum is rotated by the chain or strap and the weight lowered.

3. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat, of a drum rotatably mounted beneath the seat, a weighted chain or strap secured to the drum, an arm connecting the seat and the drum, and means for automatically releasing the seat from its normal position whereupon the chain or strap

causes the drum to rotate and the weight to descend.

4. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat, of a drum rotatably mounted beneath the seat, an arm connecting the seat and the drum, a weighted chain or strap secured to the drum and arranged to roll thereon, means for automatically releasing the seat from its normal position, whereupon the chain or strap causes the drum to rotate and the weight to descend thus raising the seat by means of said arm, and means for holding the seat in normal position when lowered and the weight is elevated.

5. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat, of a drum rotatably mounted beneath the seat, a rack secured to the seat and arranged to travel upon a pinion mounted on the axis of the drum, a weighted chain or strap secured to the drum, and arranged to be wound thereon, and means for automatically releasing the seat from its normal position whereupon the chain or strap causes the drum to rotate and the weight to be lowered.

6. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat, of a drum rotatably mounted beneath the seat, a weighted chain or strap secured to the drum and arranged to be wound thereon, and an arm connecting the seat and the drum whereby when the seat is lowered the drum is rotated and the chain or strap is wound thereon thus elevating the weight.

7. In an apparatus of the character described, the combination with a movably-mounted vehicle-seat of a drum rotatably mounted beneath the seat, an arm connecting the seat and the drum, a weighted chain or strap secured to the drum and arranged to wind thereon, a locking-clip arranged to hold the seat in place when the weight is elevated, means for automatically operating the locking-clip thus releasing the seat, whereupon the weight on the chain or strap causes the drum to rotate and the weight to be lowered, a spring arranged to bring the locking-clip back into operative position, after the seat has been released, and a lug secured to the back of the seat and arranged to engage with the clip and hold the seat in its normal position, the arm serving to rotate the drum and cause the chain or strap to be wound thereon and the weight elevated when the seat resumes its normal position.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN G. MICHAELI.

Witnesses:

CHAS. ROTH,
OTTO BOWERZER.