

E. KOHLER.
AMUSEMENT APPARATUS.
APPLICATION FILED JAN. 21, 1911.

993,840.

Patented May 30, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

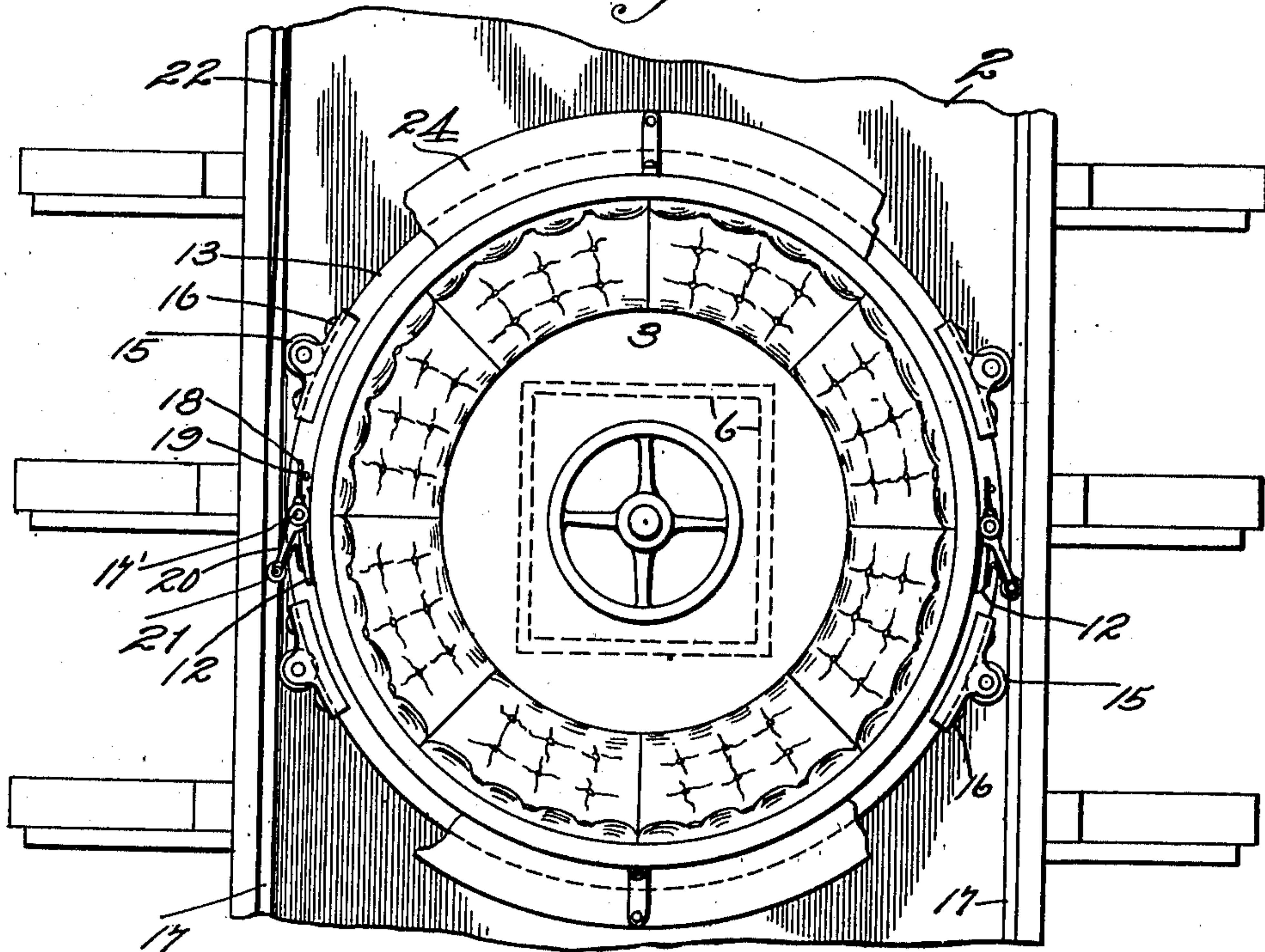
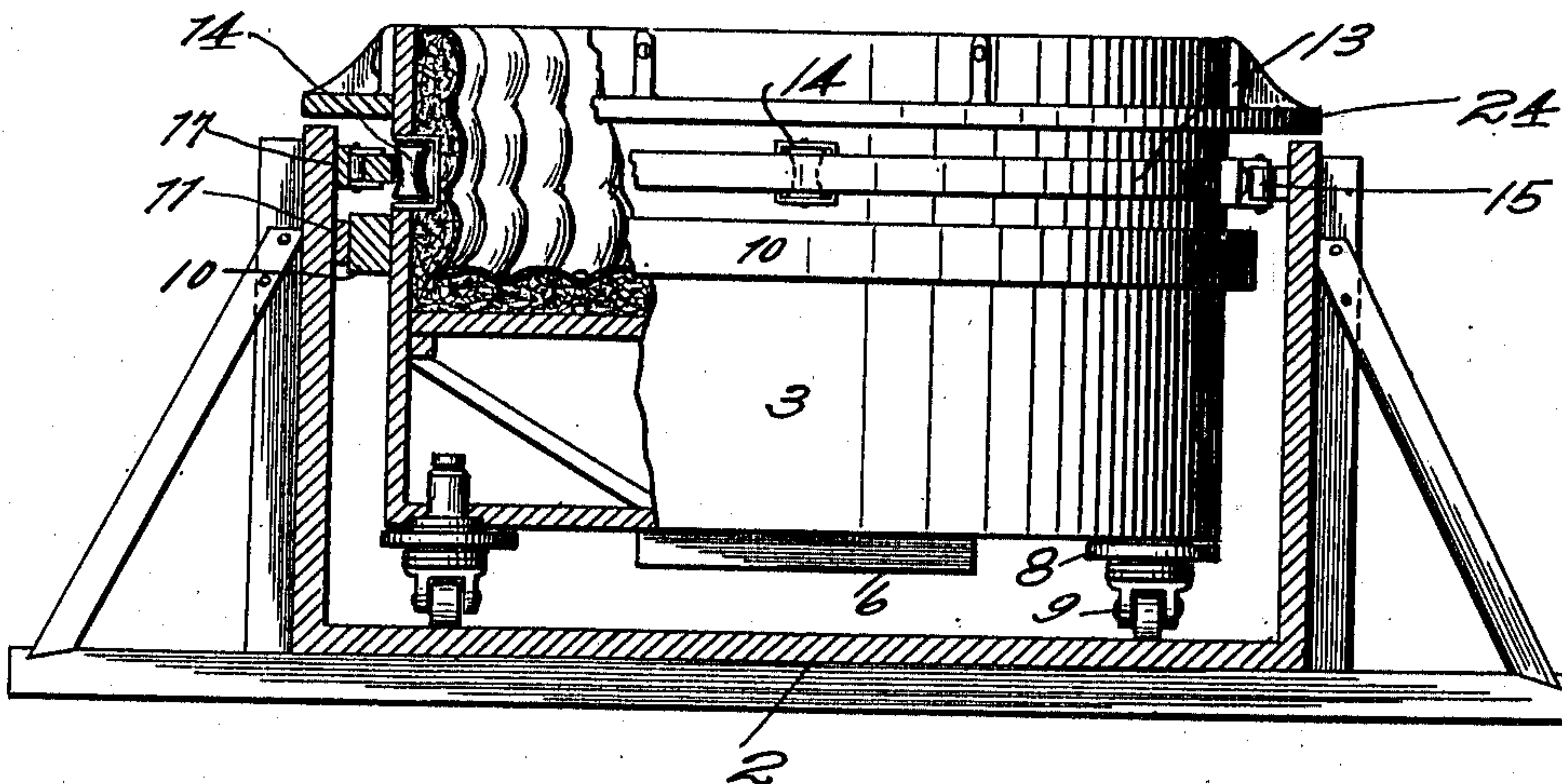


Fig. 2.



Witnesses
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J. E. Maynard.

Inventor
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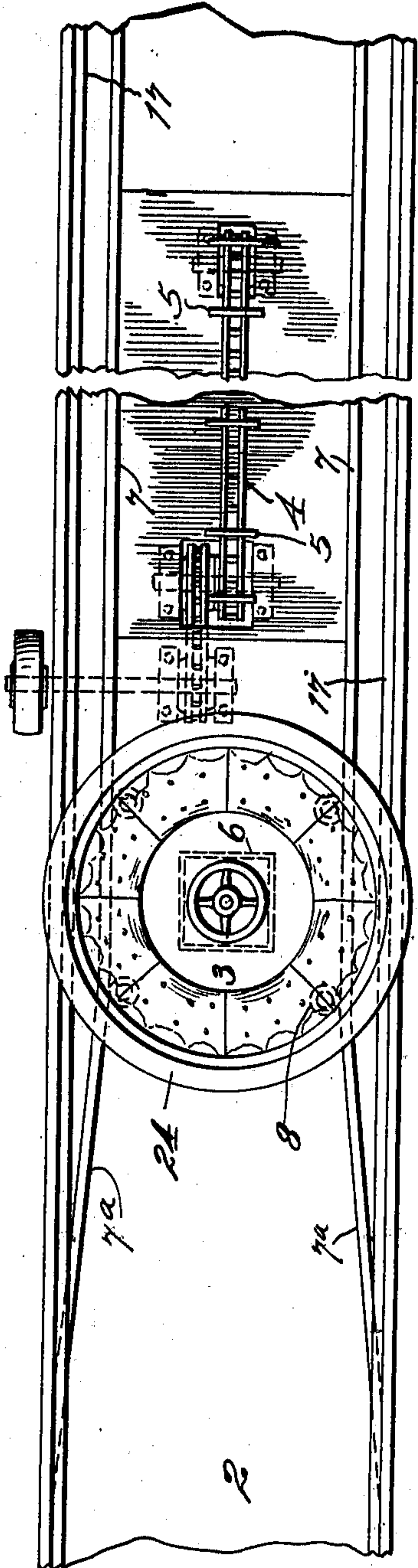


Fig. 3.

Fig. 4.

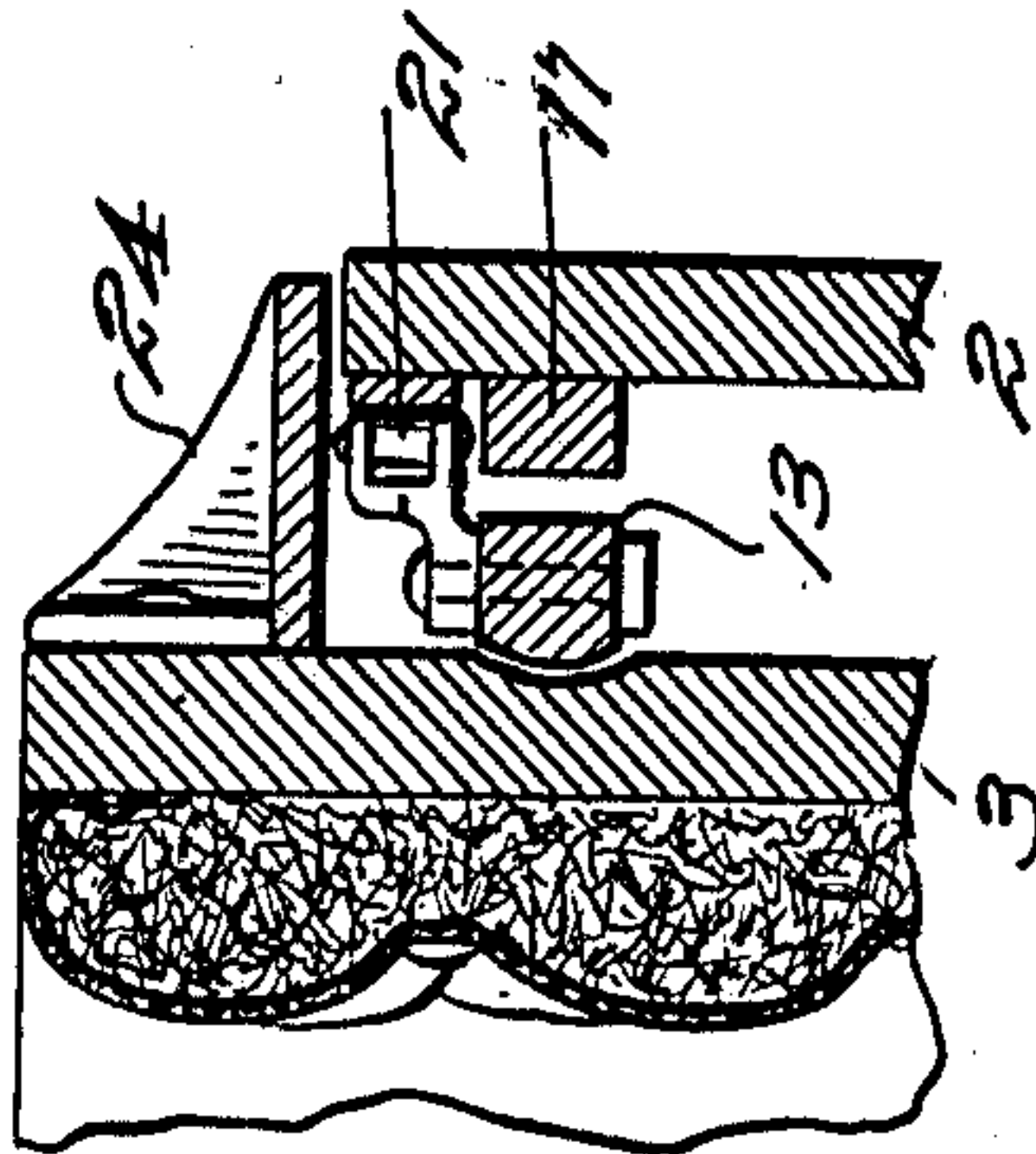


Fig. 5.

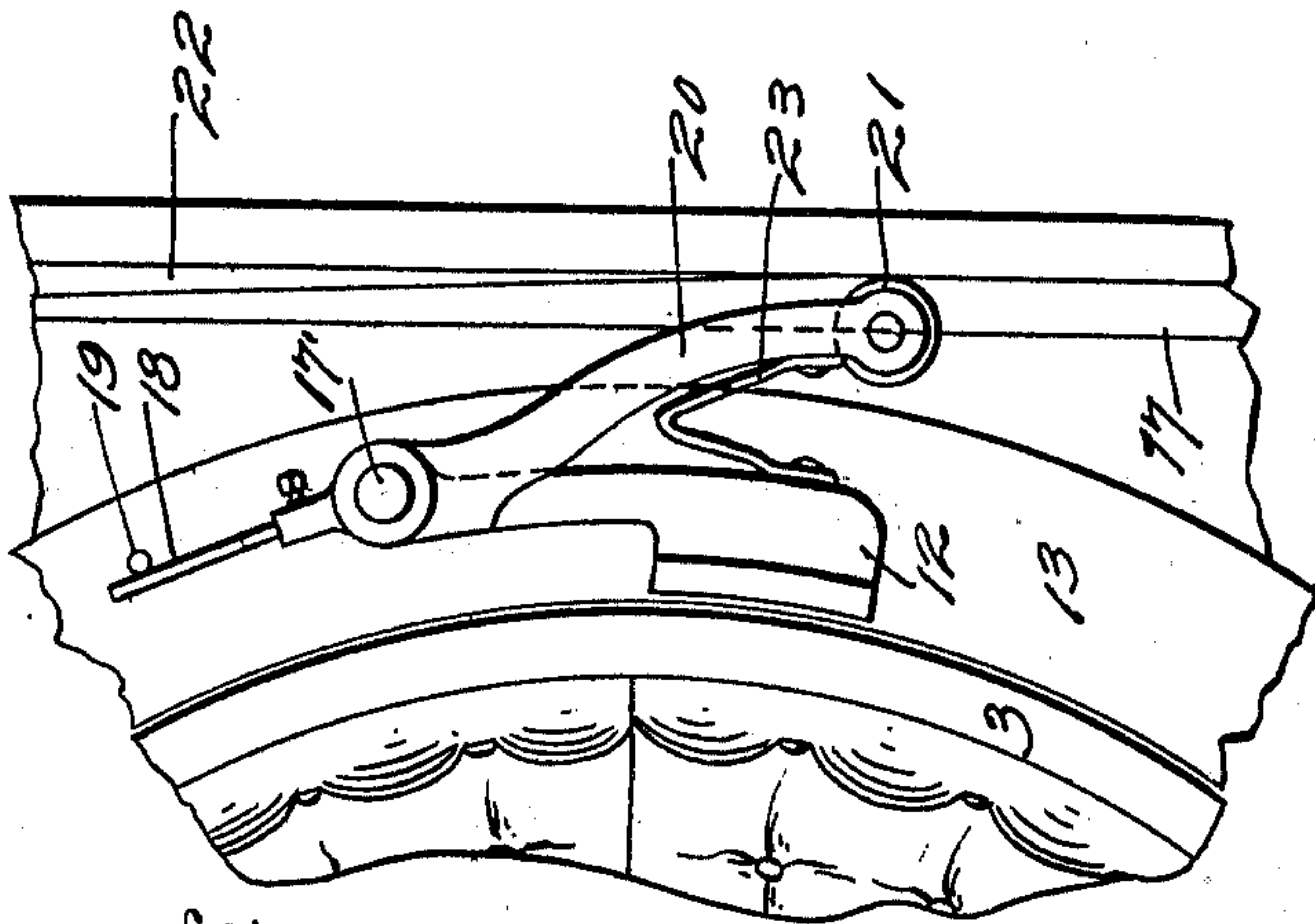
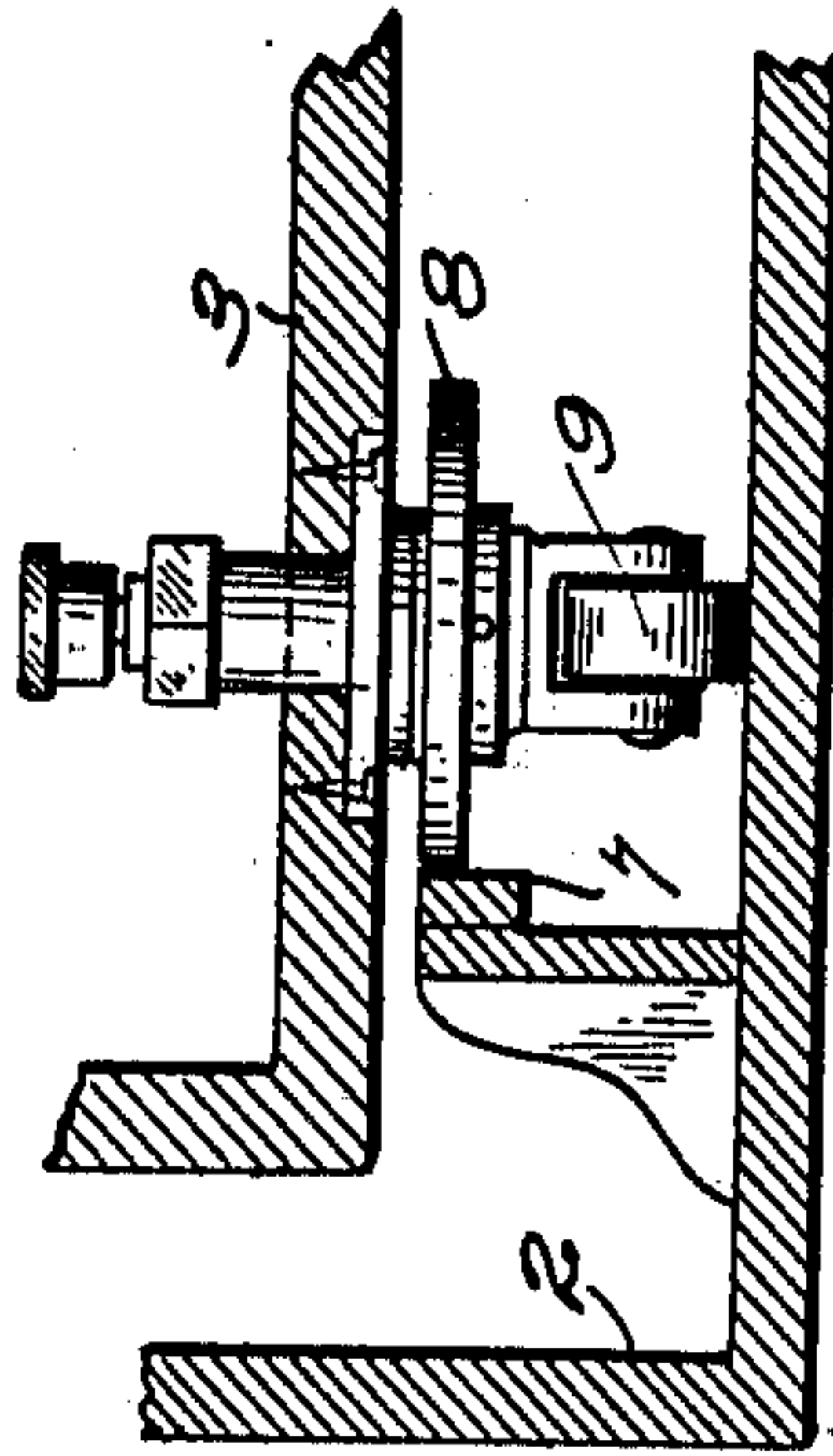


Fig. 6.

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UNITED STATES PATENT OFFICE.

ERNEST KOHLER, OF ALAMEDA, CALIFORNIA.

AMUSEMENT APPARATUS.

993,840.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed January 21, 1911. Serial No. 603,837.

To all whom it may concern:

Be it known that I, ERNEST KOHLER, citizen of the United States, residing at Alameda, in the county of Alameda and State of California, have invented new and useful Improvements in Amusement Apparatus, of which the following is a specification.

This invention relates to an amusement apparatus and pertains especially to cars and controlling devices therefor.

The object of the present invention is to provide an amusement apparatus in which are employed a plurality of cylindrical cars adapted to revolve about vertical axes; to provide means in the apparatus for controlling the rotation of a car during its traverse of the apparatus; and particularly to provide a reliable, effective, and simple means for the controlling and elevating of the moving car.

The invention consists of the parts and the combination and construction of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a plan view of a car showing a portion of the chute. Fig. 2 is a side elevation of a car showing the chute in transverse section. Fig. 3 is a plan view of the apparatus. Fig. 4 is a transverse sectional detail of the brake device. Fig. 5 is an elevation of one of the caster rollers showing in section part of the car and chute. Fig. 6 is a detail plan view showing the brake device.

In the present embodiment of my invention, 2 represents a chute supported upon an appropriate structure or frame and having vertical walls and a closed trackway or bottom upon which may travel a car 3. Manifestly, the trackway or chute upon which the car may travel may be variously inclined throughout its course, or curved transversely and otherwise erected so as to produce the desired effect of creating amusement for the passengers of the cars, and if desired the chute 2 may be inclosed in part or left uncovered by surrounding the chute with divers scenic effects, not necessary to be shown.

Where the car 3 is to be elevated by its supporting chute 2, I prefer, in the present instance, to mount in the supporting structure an appropriate form of impelling de-

vice, here represented as a sprocket chain 4, provided at suitable intervals with upwardly projecting carriers or lugs, as 5, adapted to encounter a cooperative member 6 secured to the bottom of the car 3. Preferably, this cooperative member 6 on the car bottom is in the form of a polygonal frame of such proportion that when the car has moved over the elevating device 4, one of its projecting lugs 5 will move into abutment with the depending structure 6, whereby the car will then be driven up the inclined portion of the chute 2.

In order that one of the sides of the polygonal structure 6 of the bottom of the car 3 will be properly disposed when engaged by the conveyer projection 5, there are secured upon the bottom of the chute 2 suitable guide rails 7, Fig. 3, which are adapted to embrace horizontally disposed rollers 8 mounted above casters 9 secured in the bottom of the passenger car 3. There are preferably four of the rollers 8 placed at regular intervals in a circle upon the bottom of the car so that the tracks 7 will be engaged by pairs of rollers as the car travels into position over the impelling sprocket-chain 4.

The car 3 is of somewhat less width than the chute 2, and has secured upon it a fender ring 10 adapted to be engaged at suitable intervals throughout the course of the chute 2 by fixed shoes or fenders 11 on the sides of the chute 2, these shoes being of different lengths and placed at different intervals, and on opposite sides throughout the chute. When the shoes 11 and the fender-ring 10 come into momentary contact, the car is axially revolved, causing its casters 9 and its horizontally disposed disks 8 to swing in a circle about the axis of the car. During this rotation, which may be alternately in one direction or another, the disk rollers 8 will swing in a path considerably greater than the distance between the guide rails 7 adjacent the car elevating structure 4. For this reason the rails 7 are diverged, as at 7^a, so that the rollers 8 may have a free swinging movement throughout all portions of the chute 2, save immediately adjacent the conveyer sprocket chain 4. By thus diverging the rail sections 7^a when a car moves toward the conveyer 4, the rollers 8, in whatsoever position they may occur, will be engaged by one or the other of the rail sections 7^a, and

the car automatically axially rotated until the polygonal structure 6 at the bottom of the car is brought so that some of its faces will be disposed transversely across the conveyer belt 4.

When it becomes desirable or necessary to lock the car against axial rotation during its traverse of the chute 2, a brake member 12, which is mounted upon a ring 13 loosely journaled circumferentially on the car 3, may be pressed into frictional contact with the wall of the car 3, and thus restrain its rotation. The brake supporting ring 13 is mounted upon concaved vertically disposed antifriction rollers 14, supported in the car 3, and this ring 13 is normally non-rotative by reason of the contact of opposite pairs of rollers 15 supported in suitable hangers 16, which are secured upon the ring 13. The rollers 15 being arranged in pairs upon opposite sides of the ring 13, normally travel in engagement with suitable guides 17, mounted upon the sides of the chute 2 in a plane even with the brake-band 13 and prevent rotation of the same relative to the chute 2, but allow the car 3 to freely rotate upon its casters 9.

In order to apply the brake 12 of the car 3 it is pivoted at 17' upon a vertical stud or shaft secured in the brake band 13 and provided with an oppositely projecting spring or equivalent device 18, normally engaging a stop 19. Also pivoted upon the stud 17' is a lever-arm 20 projecting forwardly adjacent the brake 12 and carrying at its outer free end a roller 21, which may constantly bear upon the side surface of the chute 2, and whenever it is desirable to apply the brake 12 of the car 3, suitable brake-applying shoes or guides 22 are secured to the inside wall of the chute so that the roller 21 on the arm 20 will be engaged and the arm 20 forced inwardly, thus compressing a substantial spring, or equivalent device, 23, secured to the arm 20 and also to the brake 12. This compression of the spring 23 by the cam or guide members 22 causes the application of the brake to the car body 3 with sufficient frictional pressure to cause the car to stop rotation or to prevent its further rotation. Immediately the lever arm roller 21 is released from a cooperative cam guide 22, the spring 23 will automatically expand, and the spring 18 abutting against its stop 19 will swing the brake 12 outwardly from engagement with the car 3.

For the protection of the occupants of the car from injury by the various devices, there is attached adjacent the upper portion thereof an annular horizontally disposed hand rail or guard 24, which is of sufficient width to project well out from the surface of the car and cover the brake mechanism and other appurtenances.

Having thus described my invention, what

I claim and desire to secure by Letters-Patent, is—

1. An amusement apparatus comprising a chute having suitable sides, a revoluble passenger-carrying car supported in said chute, casters upon said car, means for moving the car through the chute at suitable intervals, said means including a conveyer belt, a structure secured to the bottom of said car adapted to be engaged by said conveyer belt, and said chutes having side walls adjacent and converging toward the conveyer belt whereby the car is centered in the chute and the bottom structure of the car may be brought into proper cooperative relation with the conveyer belt.

2. An amusement apparatus comprising a chute having suitable sides, a revoluble passenger-carrying car supported in said chute, casters upon said car, means for moving the car through the chute at suitable intervals, said means including a conveyer belt, a structure secured to the bottom of said car adapted to be engaged by said conveyer belt, and said chutes having side walls adjacent and converging toward the conveyer belt whereby the car is centered in the chute and the bottom structure of the car may be brought into proper cooperative relation with the conveyer belt, said means including rollers mounted upon a vertical axis on the bottom of the car.

3. An amusement apparatus comprising a chute having suitable sides, a revoluble passenger-carrying car supported in said chute, casters upon said car, means for moving the car through the chute at suitable intervals, said means including a conveyer belt, a structure secured to the bottom of said car adapted to be engaged by said conveyer belt, said chutes having side walls adjacent and converging toward the conveyer belt whereby the car is centered in the chute and the bottom structure of the car may be brought into proper cooperative relation with the conveyer belt, said means including rollers mounted upon a vertical axis on the bottom of the car, and guide rails mounted upon the bottom of the chute adapted to embrace pairs of said rollers to swing the car into proper position.

4. An amusement apparatus comprising a chute having suitable sides, a revoluble passenger-carrying car supported in said chute, said car being of considerable less diameter than the distance between the sides of the chute, casters upon said car, means for moving the car through the chute at suitable intervals, means for revolving said car during its traverse of the chute, and a brake mechanism carried by the car whereby the rotation of the latter may be interrupted.

5. An amusement device comprising a chute having inclined sides, a cylindrical car

operable in the chute and revoluble about a vertical axis, casters secured to the bottom of said car, a supporting structure upon which the casters may travel, means for preventing the rotation of the car, said means including fixed rails, rollers loosely mounted upon the bottom of the car and adapted to be embraced by said fixed rails, a brake mechanism including a brake ring loosely journaled upon the car, a brake chute pivoted upon said ring, a lever arm, a resilient connection between said lever arm and the brake shoe, and brake-actuating cams adapted to move said lever arm and cause the brake to frictionally engage the body of said car. 15

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ERNEST KOHLER.

Witnesses:

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E. B. SWANSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
