No. 893,135.

PATENTED JULY 14, 1908.

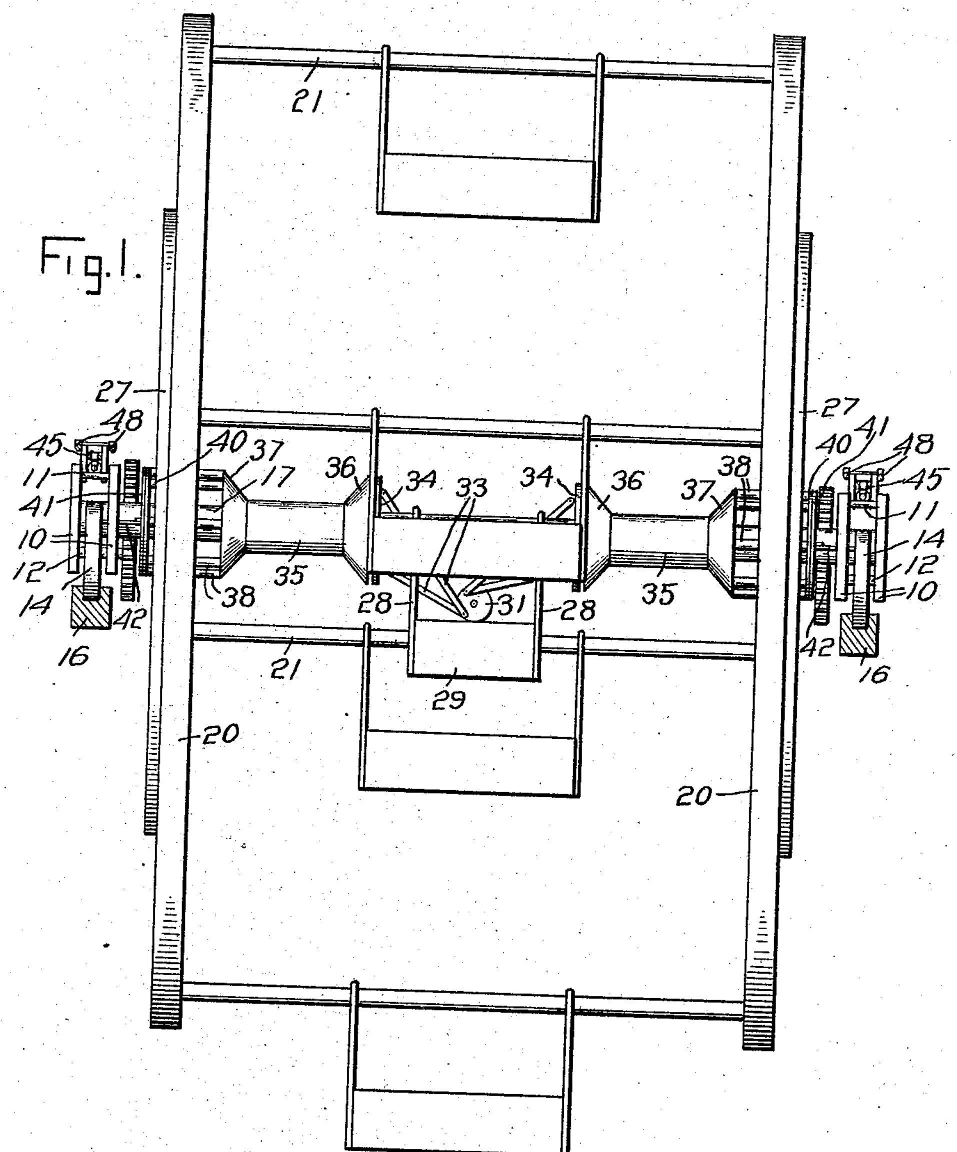
A. BRAGG.

PLEASURE RAILWAY.

APPLICATION FILED MAR. 4, 1907.

4 SHEETS—SHEET 1.

Fig. 1.



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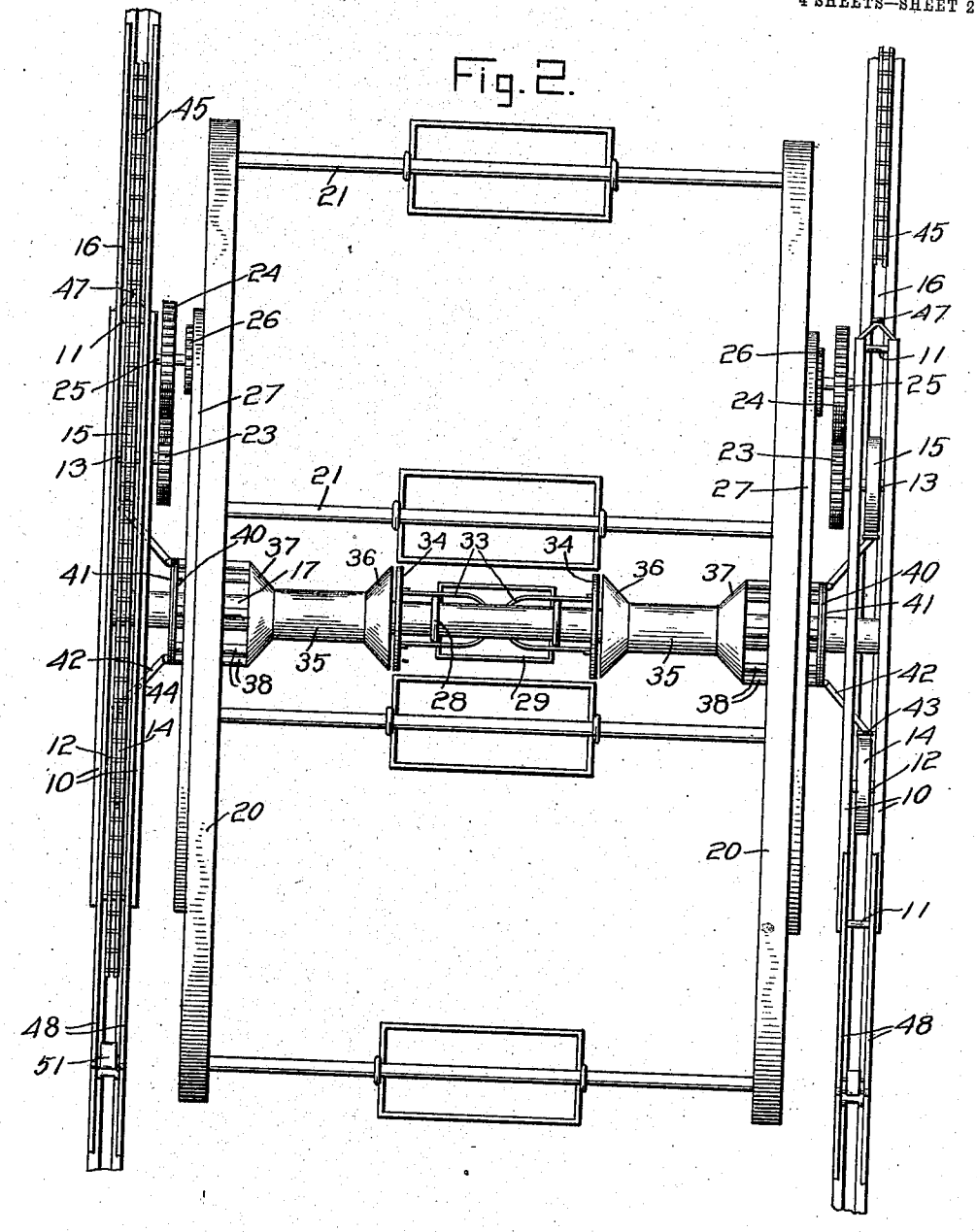
4 SHEETS—SHEET 2.

Fig. 2.



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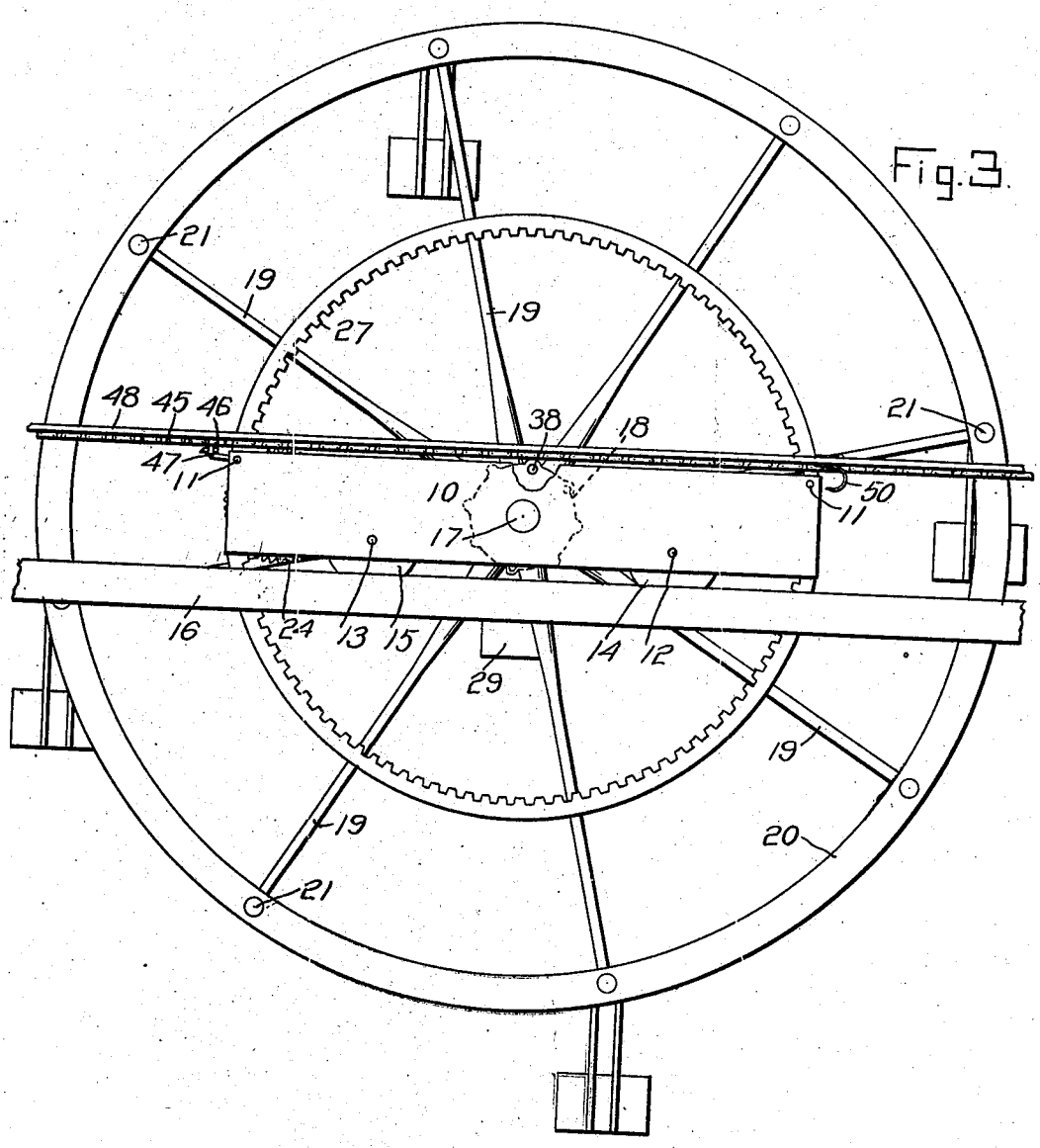
4 SHEETS—SHEET 3.

Fig. 3.



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4 SHEETS—SHEET 4.

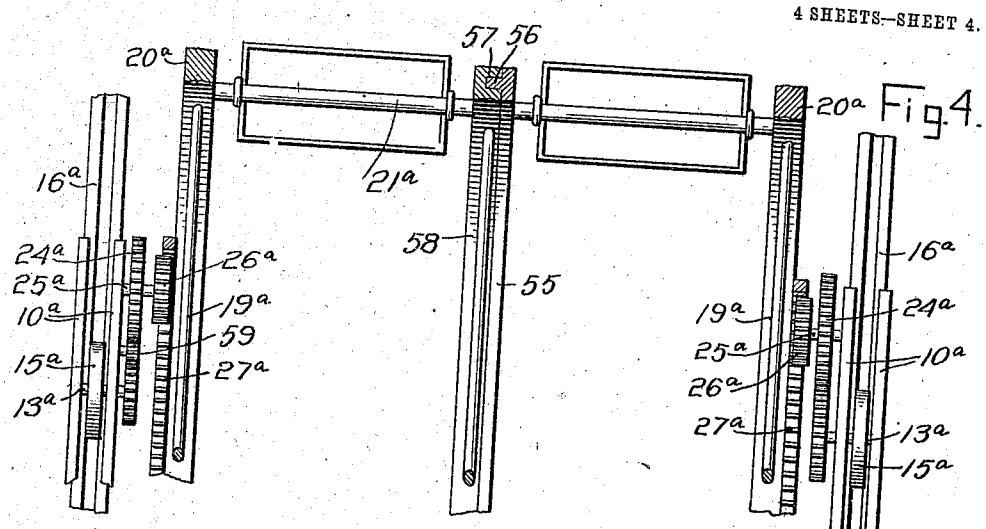

Fig. 4.

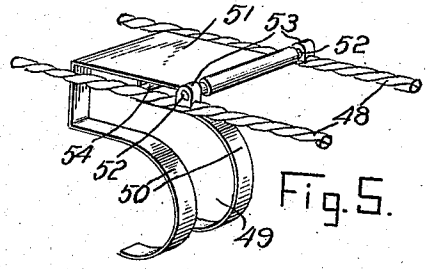

Fig. 5.

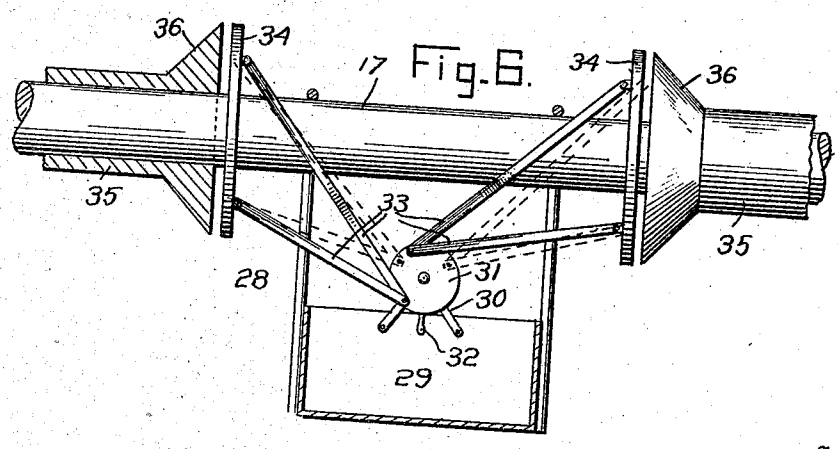

Fig. 6.

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UNITED STATES PATENT OFFICE.

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PLEASURE-RAILWAY.

No. 893,135. Specification of Letters Patent. Patented July 14, 1908.

Application filed March 4, 1907. Serial No. 360,391.

To all whom it may concern:

Be it known that I, ARTHUR BRAGG, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Pleasure-Railways; and I do hereby 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.

This invention relates to pleasure railways and more particularly to that class commonly known as cycloidal chariots and the primary object of the invention is to provide a chariot of this class which may be controlled at all times during its travel and to provide certain safety devices for obviating any likelihood of backward travel in ascending an incline.

A further object of the invention is to provide a chariot in which the cars and in fact the entire chariot turns in a direction opposite to that in which it is traveled, there being trucks arranged at each end of the chariot proper and wheels arranged within the truck and designed to travel upon tracks, there being gear connections between the wheels and the chariot for rotating the same during the travel of the chariot.

In carrying out my invention I employ a main shaft upon which the chariot is arranged and suspended from the shaft a car in which the operator of the chariot is seated. The brake mechanism for the chariot is operable from within this car and consequently the entire chariot may be controlled by the operator at all times.

In the accompanying drawings, Figure 1 is a front elevation of the chariot, Fig. 2 is a top plan view thereof, Fig. 3 is a side elevation, Fig. 4 is a detail horizontal sectional view through a modified form of my invention, Fig. 5 is a detail perspective view of one of the safety devices used in connection with the chariot, and, Fig. 6 is a detail view in elevation of the brake operating mechanism.

Referring more specifically to the drawings the chariot is shown as comprising a pair of trucks each of which consists of a pair of beams or sills 10 which are spaced from each other throughout their entire length by means of spacing bolts 11 and in which are journaled the ends of shafts 12 and 13 which carry wheels 14 and 15 respectively. These wheels are designed to travel upon tracks 16 which may be disposed at various inclines and curved at certain points as is usual in this class of railways.

Journaled at its ends in the sills 10 of the trucks substantially at the middle thereof is a main shaft 17 upon which is disposed a pair of hubs 18 which hubs are located directly inwardly of the inner sill 10 and are provided with spokes 19 which support rims 20, the said rims or rather the wheels formed by the hubs, the spokes, and the rims being spaced by means of suitable cross bars 21. From these cross bars are loosely suspended cars 22 in which the passengers are seated.

Upon each of the shafts 13 and inwardly of the inner sill 10 of each truck is arranged a pinion 23 which meshes with a pinion 24 carried by a stub shaft 25 which is mounted upon the said sill. This stub shaft also carries a pinion 26 which is in mesh with an internal gear 27 carried by the corresponding wheel of the chariot and it will be readily understood that while the chariot is in motion, motion will be imparted from the track wheels 16 by way of the gearing to the chariot proper and will revolve the same in a direction opposite to that of the traveler's chariot so that as a matter of fact the cars oscillate in a forward upward direction.

Suspended by means of suitable hangers 28 from the main shaft 17 is a car 29 which is for the operator of the chariot. Supported for turning movement within the car 29 by means of suitable brackets or uprights 30 is a disk 31 which is of considerable size and upon which is secured a handle 32 by means of which it may be turned. Pivotally connected at their inner ends with this disk at diametrically opposite points are arms 33 and I have preferably provided eight of these arms, four being pivoted at each point. At their opposite or outer ends these arms are pivotally connected with corresponding rings or annular plates 34 which are slidably disposed upon the shaft 17 and are adapted to be moved along the shaft by turning the disk 31 it being understood that this results in a change in location, to a corresponding degree, of the points of connection of the arms 33 with the disk. For example as shown in full lines in Fig. 6 of the drawings, the points of connection above referred to are arranged substantially above and below the axis of the disk whereas they are shown in dotted lines as being upon opposite sides of the said axis and in a horizontal plane, this position as

shown in dotted lines being the one assumed when the disk has been turned to move the annular plates 34 away from each other.

Arranged upon the shaft also for sliding movement and outwardly of each of the annular plates 34 is a sleeve 35 which is flanged at its ends as at 36 and 37, the flanges 36 being presented toward the annular plate. Formed integral with the flange 37 or the sleeve 35 is an annular series of outwardly projecting arms 38 which are slidably engaged through suitable bearings 39 which bearings are disposed upon the periphery of the hub 18 and one between each pair of spokes 19. These arms of each series support at their outer ends and the other side of the wheels of the chariot, a plate 40 which is annular in form and encircles the shaft 17. An annular plate 41 is also disposed upon the shaft outwardly of each plate 40 and pivotally connected with this plate 41 is a pair of brake beams 42 at the outer ends of which are located brake shoes 43 which are designed for contact with the wheels 14 and 15 of the respective truck, these brake beams being slidably engaged through bearing brackets 44 upon the adjacent beams or sills 10.

From the foregoing it will be readily understood that movement of the plates 34 from each other will result in a corresponding movement upon the shaft of the sleeves 35 which movement will bring the plates 40 and 41 in contact and will move or oscillate the brake beams 42 to bring them into engagement with the wheels 14 and 15 thereby gradually bringing the chariot to a stop.

It will of course be understood that where the track is inclined, it is necessary to provide some mechanical power for raising or causing the chariot to ascend the incline and this means is preferably in the nature of a chain 45 which is adapted to travel above each of the tracks and this chain preferably carries hook members 46 which are adapted to engage with ring members 47 supported at the forward ends of the trucks.

My invention in addition to the hereinbefore features includes means for preventing backward movement of the chariot in case the chain should break while the chariot is ascending an incline and these safety devices are supported upon cables 48 which are stretched above the tracks 16 in pairs and comprise each a trip which is substantially in the form of a hook shaped in the form of a figure 5, the bill of the hook being bifurcated as at 49 to form spaced members 50 which are designed to extend upon opposite sides of the wheels 14 and 15 at the time of passage of the chariot. The back bent portion of each hook shank which is indicated by the numeral 51 has formed upon it laterally extending arms 52 which have a pivotal connection with the cable 48 by means of bearings 53 so that the hook may swing although this swinging movement is limited in one direction by means of a cross bar 54 which is carried by this portion of the hook and engages the cable. In other words the hooks have the points of their bills directed in the direction of travel of the chariot and the members 50 are engaged successively with the spacing bolts 11 and the axles 13 and 12 which engagement serves to raise the hooks after which they drop back to their normal position and in case the chains 45 should break the said spacing bolts and axles will be received in the hooks and the backward movement of the chariot arrested.

In order to prevent passengers extending their arms through the spokes of the wheel and becoming injured, I have secured upon the spokes of each wheel a continuous sheet of stout wire screen.

In the modified form of my invention practically the same construction is disclosed with the exception of the braking mechanism and the location of the operating seat and corresponding parts in the view illustrating this form of the invention to parts in the other form just described, are indicated by corresponding reference numerals with the addition of the suffix *a*. In this form of my invention however I make use of two wheels and provide upon the outer face of the inner rim 55 of one wheel an annular rib 56 which seats in an annular groove 57 formed in the opposing face of the inner rim 58 of the other wheel and upon one side of the machine and between the pinions 23^a and 24^a I interpose an idler 59 which serves to rotate the wheel at this side of the chariot in the same direction as that in which the chariot is traveling and consequently in an opposite direction to that in which the other wheel is rotating.

What is claimed is—

1. In an amusement device of the class described, rails, wheeled trucks supported for travel upon the rails, a shaft journaled in the trucks, a wheel frame supported by the shaft for rotation therewith, a car hung loosely from said shaft within said wheel frame, a brake mechanism movable longitudinally of the shaft and coöperating with the wheels of the trucks, and means located within the car whereby the brake mechanism may be actuated.

2. An amusement device of the class described comprising rails, wheeled trucks supported for travel upon the rails, a shaft journaled in the trucks, a wheel frame supported by the shaft for rotation therewith, sleeves slidable upon the shaft, brake devices operable by the sliding of the sleeves to coöperate with the wheels of the trucks, and means whereby the sleeves may be shifted to operate the brake elements.

3. An amusement device of the class described comprising a pair of tracks, wheeled

trucks supported for travel upon the tracks, a shaft journaled at its ends in the trucks, a wheel frame supported by the shaft for rotation therewith, brake elements arranged for coöperation with the truck wheels, and means slidable upon the shaft for operating the said elements.

4. In an amusement device of the class described, rails, wheeled trucks supported for travel upon the rails, a shaft journaled in the trucks, a wheel frame supported by the shaft for rotation therewith, a car hung loosely from said shaft within said wheel frame, a brake mechanism movable longitudinally of the shaft and coöperating with the wheels of the trucks, and eccentric means located within the car whereby the brake mechanism may be actuated.

5. In an amusement device of the class described, rails, wheeled trucks supported for travel upon the rails, a shaft for rotation in the trucks, a wheel frame supported by the shaft for rotation therewith, gear connections between the shafts of the truck-wheels and the wheel frame for rotation of the latter in a direction opposite to the direction of travel of the trucks, and a brake mechanism supported by the shaft and coöperating with said truck wheels whereby the speed of travel of the trucks and the speed of rotation of the frame may be simultaneously regulated.

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

ARTHUR BRAGG.

Witnesses:
BERNHARDT FABER,
MAY V. BRAGG.