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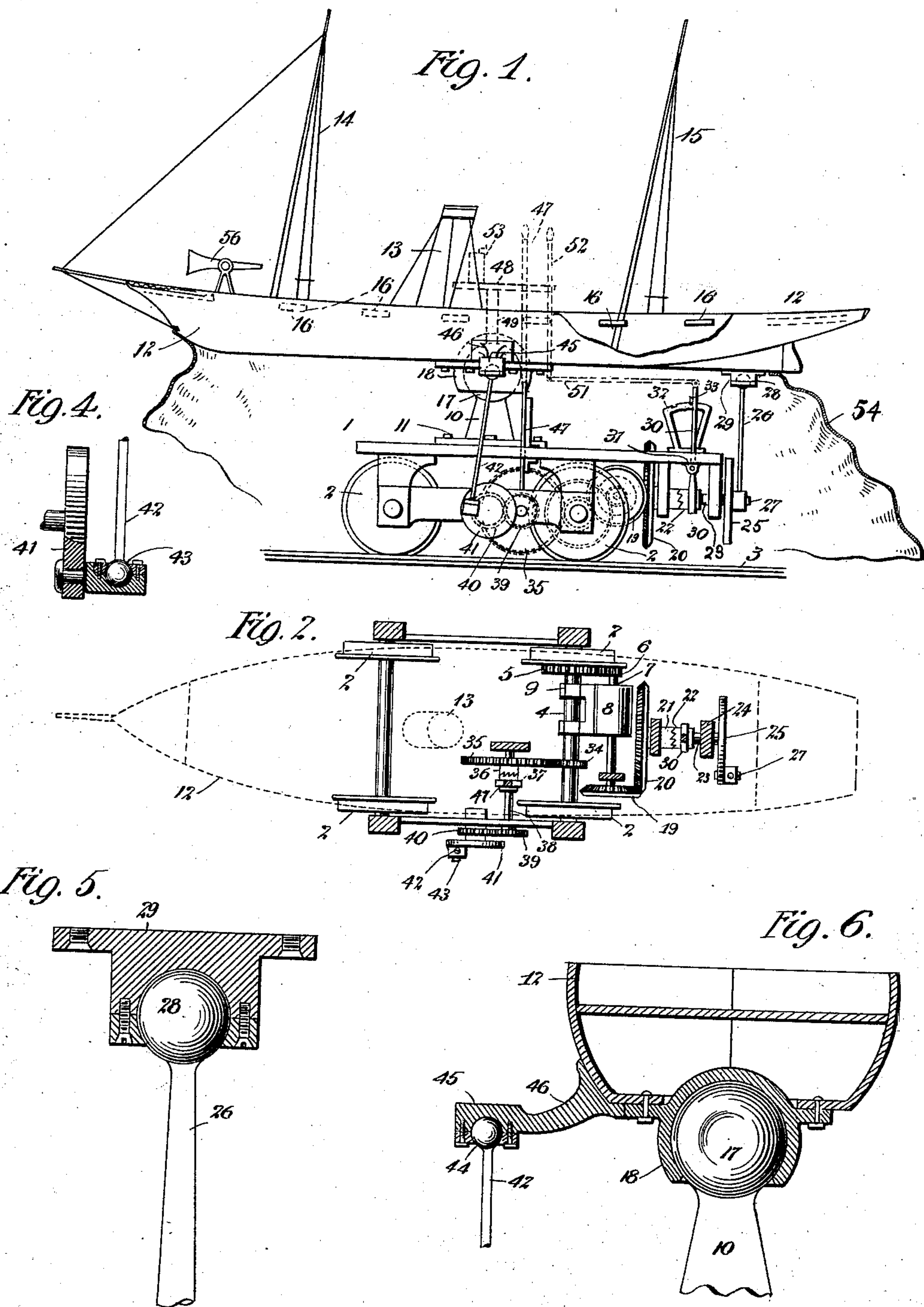
Patented Dec. 30, 1902.

G. W. SCHOFIELD.  
AMUSEMENT APPARATUS.

(Application filed Nov. 14, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses  
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Inventor  
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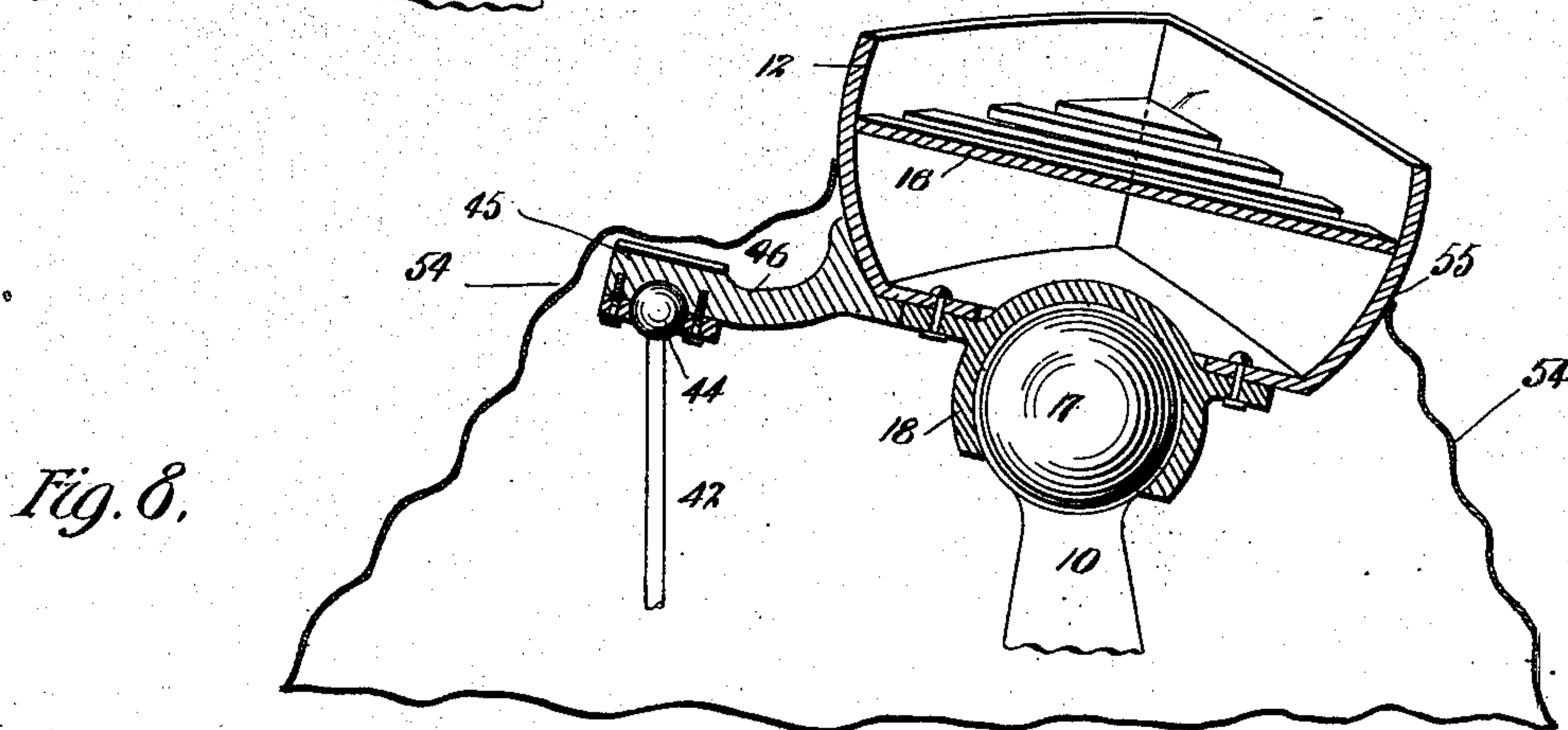
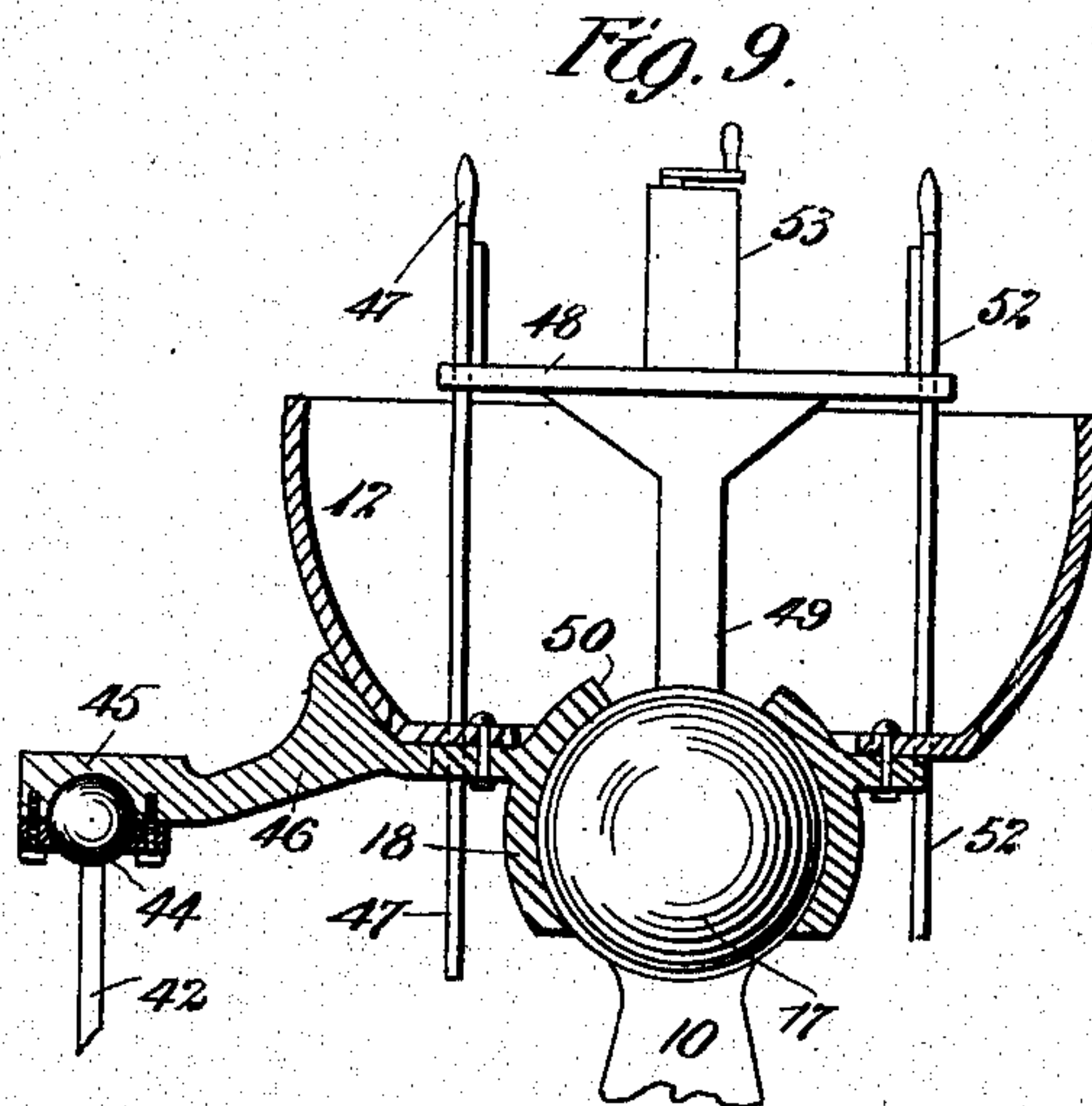
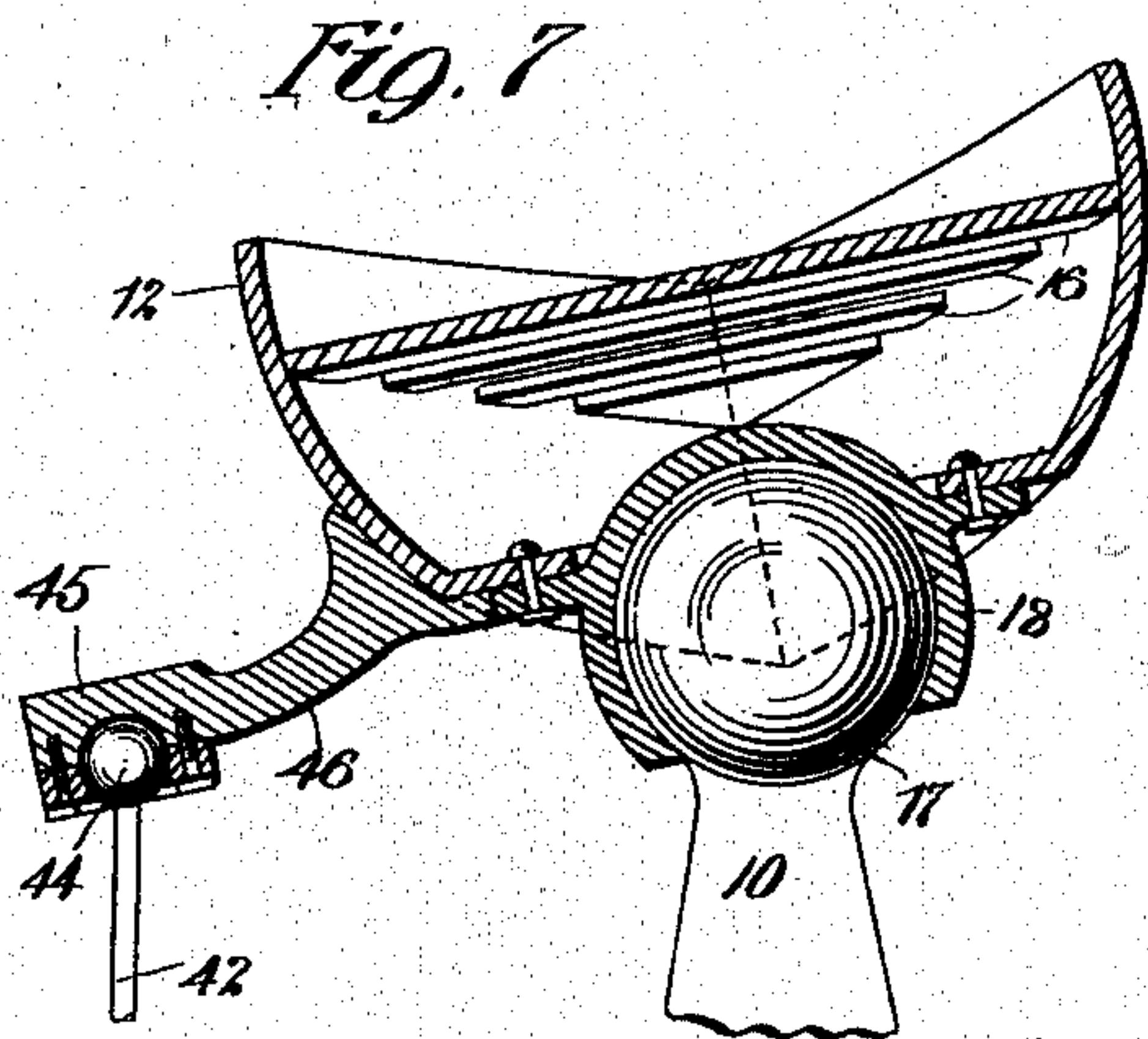
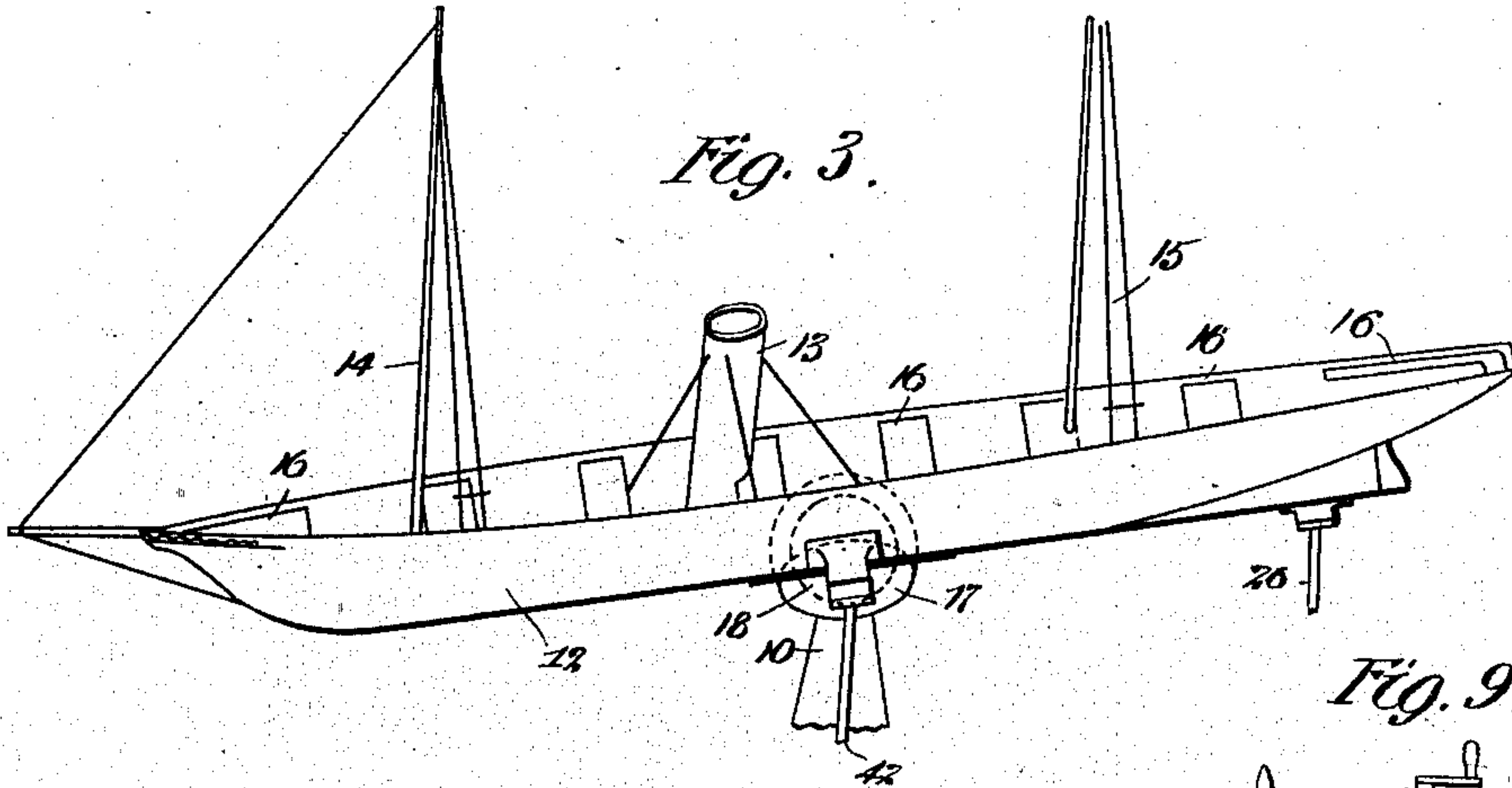
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# UNITED STATES PATENT OFFICE.

GEORGE W. SCHOFIELD, OF NEW YORK, N. Y.

## AMUSEMENT APPARATUS.

SPECIFICATION forming part of Letters Patent No. 717,457, dated December 30, 1902.

Application filed November 14, 1902. Serial No. 131,352. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. SCHOFIELD, a citizen of the United States, residing in the borough of Brooklyn, New York city, county  
5 and State of New York, have invented certain new and useful Improvements in Amusement Apparatus, of which the following is such a full, clear, and exact description as  
10 it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in amusement and recreation apparatus; and  
15 the particular objects of the invention are to provide such a form of apparatus in which the passengers are subjected to various and compound motions through the air while  
20 seated in or upon the device; and to these ends my invention consists in the various novel and peculiar arrangements and combinations of the several parts of the apparatus, all as hereinafter fully described and then  
25 pointed out in the claims.

I have illustrated a type of my invention in the accompanying drawings, wherein—

Figure 1 is a side view of apparatus embodying my invention, the same being shown  
30 as traveling upon ordinary rails or car-tracks and with the oscillating seat-carrying part or body standing in horizontal position. Fig. 2 is a horizontal sectional view of the apparatus, the plane of which lies beneath the  
35 platform of the car-track, the dotted lines representing the body or seat-carrying part which oscillates above the car. Fig. 3 is a side view of the oscillating seat-carrying part or body with the car or truck omitted. In  
40 this view the seat-carrying part is shown as moving from its horizontal position into an inclined one with the forward end dipping down and the near side thereof depressed, and this is one of the several positions assumed by the oscillating and rocking part.  
45 Fig. 4 is an enlarged detail view, partly in section, of a detached portion of the rocking device which is attached to the side of the seat-carrying part or body. Fig. 5 is an enlarged detail view, partly in vertical section,  
50 of the upper part of the means for oscillating the seat-carrying part or body. Figs. 6, 7, and 8 are enlarged vertical cross-sectional

views of the seat-carrying part or body at the central point thereof, together with the joint  
upon which it is mounted and the connection  
55 at the side by which it is rocked on such joint. These three views show, respectively, the seat-carrying part or body in horizontal position—that is, level—and in the position  
60 when it is rocked to one side and dipping down at one end; and in the position when it is rocked to the other side and dipped down at the other end. Fig. 9 shows a central vertical cross-section of the seat-carrying part  
65 and its joint upon which it is mounted and the upper part of the mechanism, together with the stand or seat where the operator is located and the device for controlling the motion of the car on the tracks, as well as the  
70 oscillation and rocking of the seat-carrying part.

Referring to the drawings, in which like numbers of reference designate like parts  
75 throughout, 1 is a car or vehicle having ground-wheels 2 2, which travel upon tracks 3, which may be laid in any desired path suitable for the purpose of this apparatus, such path being, for example, an oblong loop or a circular one. Upon one of the truck-axes 4 is a fixed  
80 gear-wheel 5, with which meshes a pinion 6, fast upon the shaft 7 of a motor 8, which is mounted loosely on the axle 4 by a frame 9. This motor may be any suitable well-known  
85 kind of motor—such, for example, as an electric motor—and by the means derived it serves to drive the axle of the truck and the wheels attached thereto, and thereby propel  
90 the car along the track in one direction or the other, depending upon the direction of rotation of the motor, which is adapted to run in one direction or the other in the usual way.

At a suitable point on the car is mounted  
in fixed position a stand or frame 10, which  
is secured to the car by bolts 11. Upon the  
95 upper end of the stand 10 and at about the center of length thereof, likewise the center of width, is mounted an oscillating seat-carrying part or body 12, which in the construction  
100 hereshown is made in the form of a steam-boat or yacht having a smoke-funnel 13 and masts and rigging 14 and 15, together with other features of such a class of boat in order to fully carry out the design. This oscillating part or body 12 is provided with a num-



ber of seats 16, designed for passengers to sit upon, at about the center of length of the seat-carrying part or body 12, likewise its center of width. The same is mounted upon the upper end of the stand 10 by means of a loose joint, which permits of the body 12 being oscillated on its transverse axis and at the same time rocked upon its longitudinal axis. In the present construction I have shown an ordinary form of universal joint between the member 12 and the stand 10 and comprising a globe or bolt 17, made fast at its under side to the stand 10 and fitting into a socket 18, secured to the under side of the body 12. By virtue of this universal joint at this point the seat-carrying body or boat-like structure 12 may be moved in various different directions and may be given at the same time a rocking motion on its longitudinal as well as transverse axis, the result of which simultaneous movements will closely resemble the motion of the boat in rough water. In Fig. 3 I have endeavored to illustrate the resultant movement or motion of the body 12 when it is simultaneously moved on its transverse and longitudinal axis. At the same time that the passenger-carrying part or body 12 is given these various movements on its bearings the car or vehicle on which it is mounted is also moved on the track 3, and this motion increases the sensation of motion experienced by the passengers in the part 12. There are various ways in which this passenger-carrying part 12 may be carried and oscillated; but I prefer to obtain this motion from the motor 8, which drives the car or vehicle, and this I do by mounting the bevel-gear 19 upon the motor-shaft 7 and gearing therewith another bevel-gear 20, which is arranged in vertical position and drives a part 21 of a clutch, the movable part 22 of which clutch is feathered on a shaft 23, mounted in a suitable bearing 24 and carrying at its outer end a disk or wheel 25, which is fast thereon. A pitman 26 is connected at its lower end loosely with a pin 27, fixed upon the disk or wheel 25, and its upper end is connected with the underside of the member or body 12 on the center line thereof by means of a ball-and-socket joint 29. (See Figs. 1, 3, and 5.) The clutch member 22 is provided with an operating-lever 30, which is pivoted at 31 upon the car and is provided with a rocking segment 32, with which engages a latch 33 upon the lever for holding the clutch-lever open or closed, as desired. When the lever 30 is thrown into the position shown in Figs. 1 and 2, the clutch is closed, and the pitman 26 is then reciprocated when the current is on the motor, and this reciprocation as the pitman moves up serves to raise the right-hand end of the body 12 and to lower the left-hand end thereof, as shown in Fig. 3, and as the pitman descends this movement is reversed and again repeated as the pitman moves upwardly, thus oscillating the body 12 on its transverse axis on the central joint 17 and 18.

In order to rock the body or boat 12 on its longitudinal axis, I provide the following means, which is also operated from the car-motor 8: Upon the car-axle 4 is made fast a pinion 34, which meshes with a larger gear-wheel 35, which in turn drives the part 36 of a clutch, the movable part 37 of which is feathered on a shaft 38, having a fixed gear-wheel 39 driving another gear-wheel 40, which actuates a pitman-wheel 41, to which a pitman 42 is loosely connected. By means of a ball-and-socket joint 43 (see Fig. 4) the upper end of this pitman 42 is connected by means of a ball-and-socket joint 44 and 45 with a fixed arm 46, projecting laterally from the side of the part 12 at a point thereof in line with the center of the joint 17 and 18, so that the vertically-reciprocating motion of the pitman 42 will act to roll or rock the boat or body 12 on its longitudinal axis, at the same time permitting such part to oscillate on its transverse axis, as already described. (See Figs. 3, 7, and 8.)

It is obvious that by leaving open both of the clutches for actuating the member 12 the car may be run by its motor 8 without moving the body 12 and that by closing either one or both of said clutches the body 12 may be given either one of the described motions alone or may be given such motions together, the resultant of which is a compound movement, as indicated in Fig. 3 and is also shown in Figs. 7 and 8. The oscillating and rocking motion of the passenger-carrying part or body 12 is limited in its rocking movement by the ball-and-socket joint 17 and 18, by which it is mounted on the standard-post 10, and it is likewise limited in its movement by each of the pitmen 26 and 42; but as the weight of this part is very great when it is full with persons other precautions may be taken for limiting the movement and gradually checking it, and for this purpose strong springs may be used.

The clutch 35 37 for controlling the operation of the pitman 42 for rocking the boat from side to side has a movable part 37 thereof connected with a suitable lever 47, which extends up above the car and through a suitable opening in the bottom of the body 12 and up beyond the platform 48, upon which the operator or pilot is located. This platform 48 is secured in fixed position above the post 10, it being shown as being fixed directly to the top of the bolt 17 of the bearing by means of a support or lug 49, a suitable opening 50 being made in the top of the socket 18, in which the bolt fits to allow the body 12 to be rocked or oscillated in any direction, while the operator's platform 48 remains in stationary position, so that he receives no motion from the rocking body or part 12.

The controlling-lever 30 of the clutch 21 22, which operates the pitman 26, has its upper end pivoted to a link 51, which is shown in the dotted lines in Fig. 1, and the other end of this link is pivoted to a hand-operated le-



ver 52, which extends up through an opening in the bottom of the body 12 and within reach of the operator when seated upon the platform 48, so that this clutch may be opened and closed by the operator manipulating the lever 52, the same as the other clutch is controlled by the lever 47, (see Figs. 1 and 9,) and an electric-current controller 53 is also arranged upon the operator's platform 48 for controlling the current to the electric motor 8 and reversing the direction of the same in the usual manner.

In order to still further carry out the idea of a boat in its pitching and careening motions in the water, I provide a somewhat flexible cover 54, which may be hung from any suitable point along the hull of the boat—for example, from the supposed water-line 55. This part 54, which I have called a "cover," because it conceals the mechanism lying beneath the rocking part or body 12, may be made of any suitable material, which, if preferred, may be flexible, such as canvas or leather, and its outer surface may be made in ridges or to have the appearance of waves and the same be painted to more closely simulate the surface of the water. Where the material is quite flexible, the action of the air confined beneath it as the body 12 rocks and oscillates will cause such material to move upon itself and give it the appearance of moving the water.

In order to still further carry out the idea of the boat or ship, I provide the same with on ordinary fog-horn 56, which is located near the bow of the boat 12 and is automatically operated by the motion of the boat.

Of course there are various additions which may be made to the different parts of the boat structure in order to make the same more realistic. However, I have shown but a few of such features in order to avoid making the drawings complicated.

I wish to be understood as not limiting my invention to the specific form of construction of the various parts thereof as herein set forth, as various changes may be made therein without, however, departing from the spirit of the invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An amusement apparatus comprising the combination of a suitable movable member adapted to oscillate or rock in various different planes and to carry passengers thereon, and means for actuating it, substantially as and for the purpose set forth.

2. An amusement apparatus comprising the combination of a suitable movable member adapted to carry passengers thereon, the said member oscillating on one axis thereof and rocking upon another axis thereof, and means for actuating it, substantially as and for the purpose set forth.

3. An amusement apparatus comprising the combination of a suitable movable mem-

ber adapted to carry passengers thereon, the said member oscillating upon its transverse axis and rocking upon its longitudinal axis and means for actuating it, substantially as and for the purpose set forth.

4. An amusement apparatus comprising the combination of a suitable movable member adapted to carry passengers thereon, and oscillating or rocking in various different planes, and means for actuating it, a car or vehicle upon which said member is mounted and means for moving the same, substantially as and for the purpose set forth.

5. An amusement apparatus comprising the combination of a suitable movable member adapted to carry passengers thereon, and oscillating or rocking in various different planes, and means for actuating it, a car or vehicle upon which said member is mounted and provided with means for actuating said member, and means for moving said car or vehicle, substantially as and for the purpose set forth.

6. An amusement apparatus comprising the combination of a suitable movable member adapted to oscillate or rock in various different planes and to carry passengers thereon, a motor for oscillating or rocking said member, and suitable driving connections between said motor and member, and a set of clutches each controlled independently of the other, whereby the moving member may be actuated upon one axis or upon several of its axes, substantially as and for the purpose set forth.

7. An amusement apparatus comprising the combination of a suitable movable member adapted to oscillate or rock and to carry passengers thereon, a motor for actuating said member, a stationary operator's stand arranged over and above said member, and a controlling device for said motor located on or near said operator's stand, substantially as and for the purpose set forth.

8. An amusement apparatus comprising the combination of a suitable movable member adapted to oscillate or rock and to carry passengers thereon, a car or vehicle upon which said member is mounted and oscillates, means for propelling the car, the said member receiving its motion from the car and means for controlling the connections through which said motion is transmitted, and a stationary operator's stand arranged over and above said rocking member, and controlling devices for controlling the car-propelling means and the motion of transmitting means of the said member, said controlling devices being located on or near said operator's stand, substantially as and for the purpose set forth.

9. An amusement apparatus comprising the combination of a suitable movable member adapted to oscillate or rock and to carry passengers thereon, a car or vehicle upon which said member is mounted by means of a universal joint, a suitable opening in the bottom of said member, a stationary stand



arranged over and above said rocking member and having a support extending through the opening in the bottom of said member and connected with a fixed part, substantially as and for the purpose set forth.

10. An amusement apparatus comprising the combination of a suitable movable member adapted to oscillate or rock and to carry passengers thereon, the said member being mounted at a point between its ends, a motor for actuating said member, a pitman connected with said member on its center line near one end and also connected with a drive-wheel receiving this motion from said motor, a second pitman connected with one side of said member and also with a second drive-wheel receiving its motion from said motor, substantially as and for the purpose set forth.

11. An amusement apparatus comprising the combination of a suitable boat-like structure or member, adapted to oscillate or rock and means for actuating it, a flexible cover hung from the sides of the boat-like structure, substantially as and for the purpose set forth.

12. An amusement apparatus comprising the combination of a suitable boat-like structure or member, a car or vehicle upon which said boat-like structure or member is mounted and means for actuating said member to oscillate or rock it, and a flexible cover hung from the sides of said boat-like structure and covering the subjacent structure or car, substantially as and for the purpose set forth.

13. An amusement apparatus comprising the combination of a suitable boat-like structure adapted to oscillate or rock and to carry passengers thereon, and means for actuating it, and a horn or like device mounted upon said member and automatically actuated by the motion thereof, substantially as and for the purpose set forth.

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

GEORGE W. SCHOFIELD.

Witnesses:

FREDERICK B. CAMPBELL,  
WILLIS FOWLER.