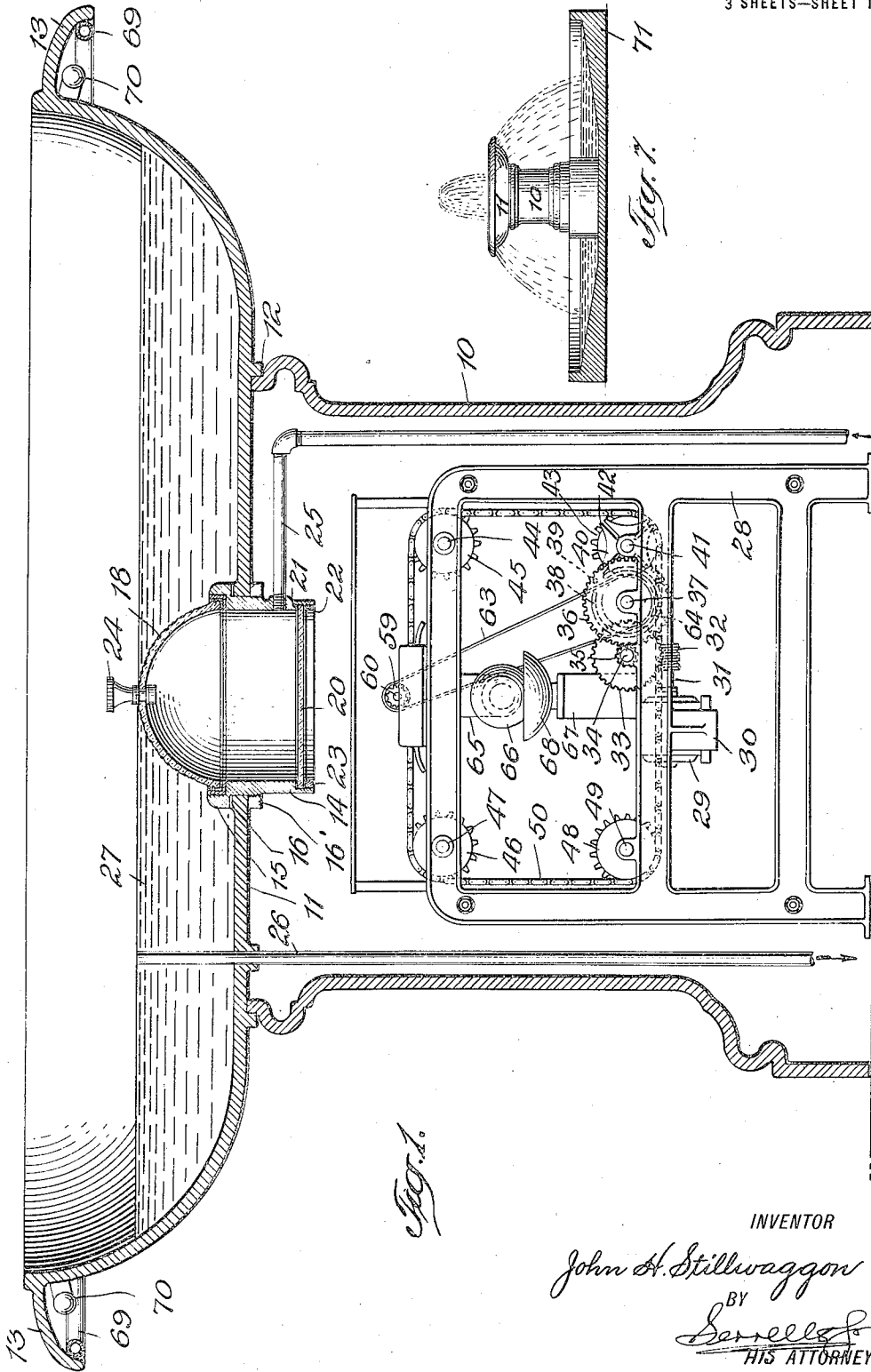


J. H. STILLWAGGON.
AQUATIC DISPLAY APPARATUS.
APPLICATION FILED OCT. 26, 1917.

1,281,869.

Patented Oct. 15, 1918.
3 SHEETS—SHEET 1.



INVENTOR

John H. Stillwaggon

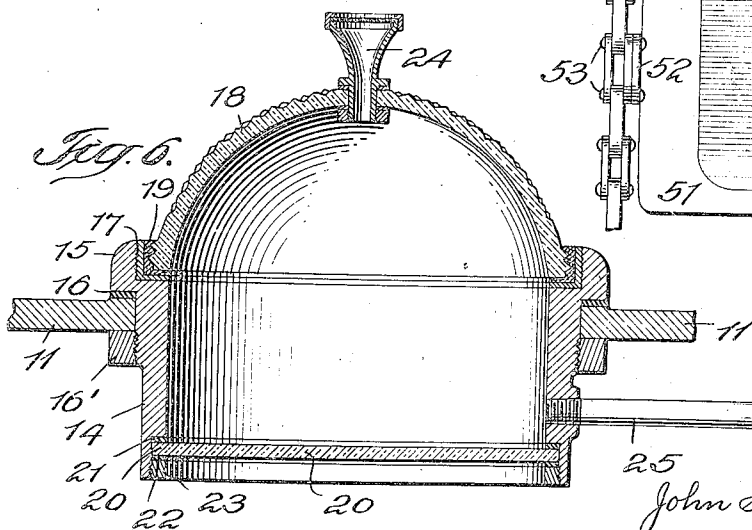
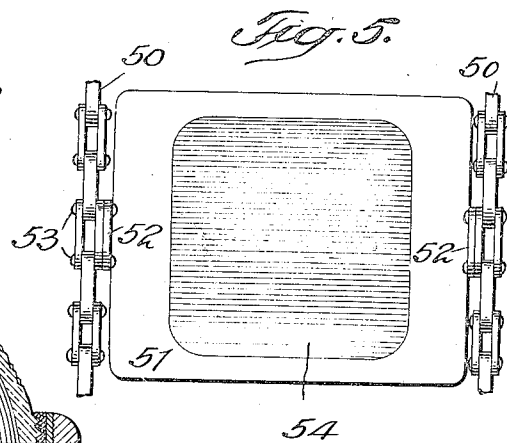
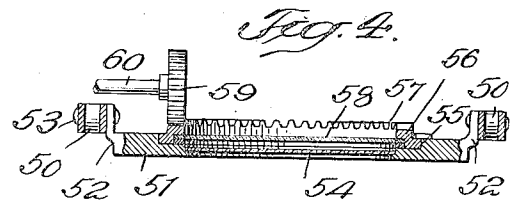
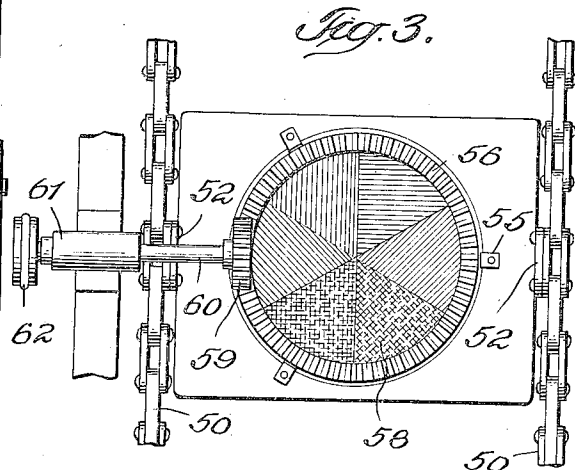
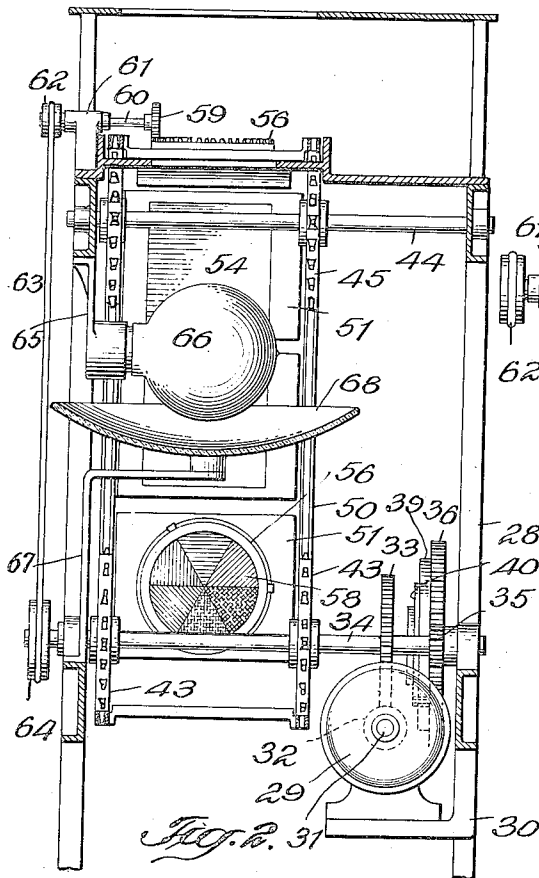
BY

Barrellson
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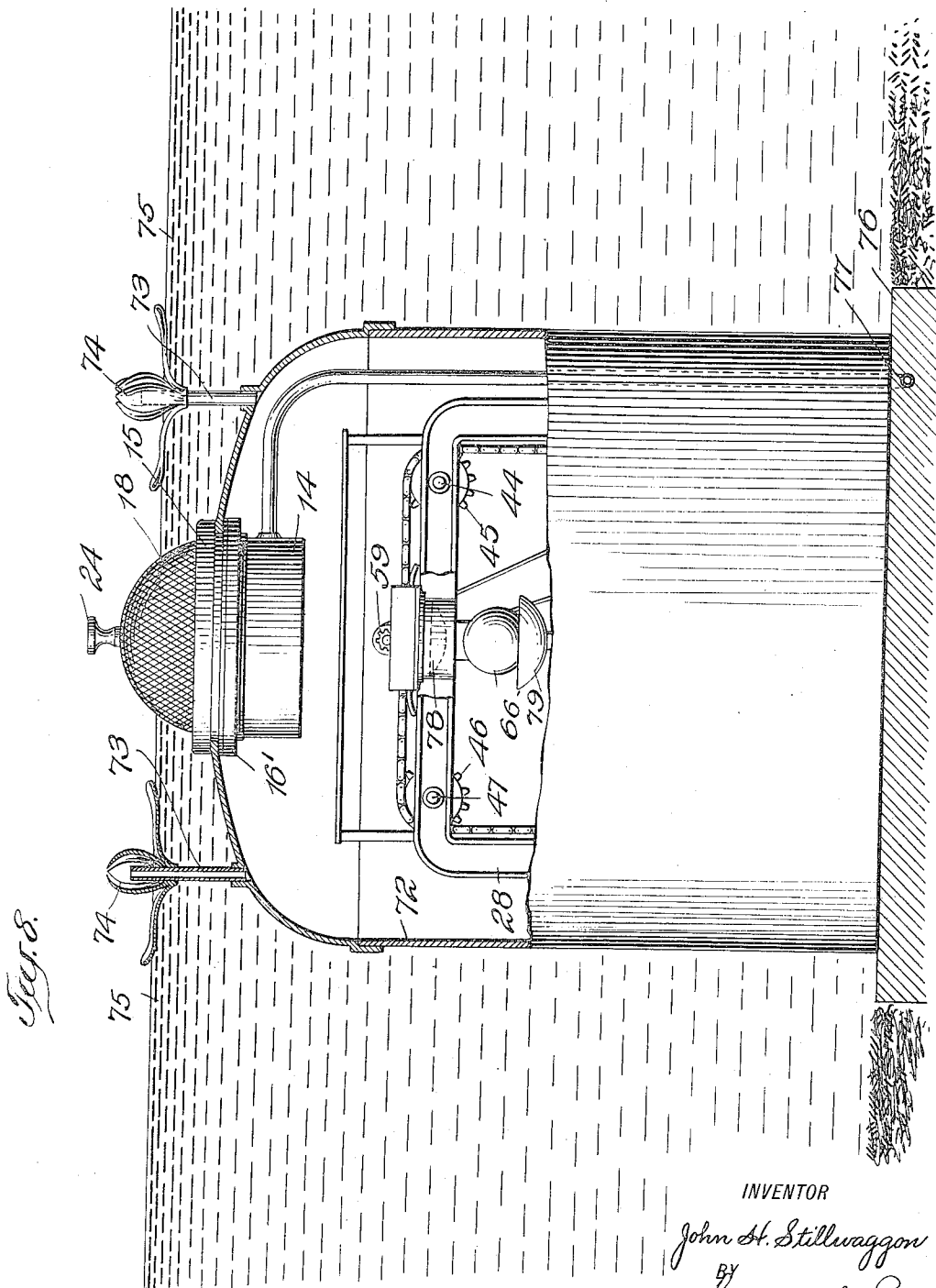


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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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AQUATIC DISPLAY APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. STILLWAGGON, a citizen of the United States, residing Richmond Hill, in the county of Queens, city and State of New York, have invented an Improvement in Aquatic Display Apparatus, of which the following is a specification.

This invention relates to an apparatus by which various color effects are produced in a display apparatus in the form of a fountain which may be constructed for ornamental purposes, or to be submersed, or to be portable for use as a sprinkler, or in any one of various other constructions to which the invention may be found to adapt itself. I am aware that heretofore various colored lights have been projected through a spray of water to produce display effects, and many of these no doubt have been successful from the aesthetic point of view. In these various apparatus however, as hereinbefore stated, the light has been projected merely through the water in the form of a spray and the effect of the light is thereby more or less limited. In the present invention to increase the display effects I project the various colored lights, either singly or in multiple to produce a kaleidoscopic effect, through water contained in a reservoir to which the water is supplied and through which it is passed and projected in the form of a spray so that the light effects are increased by passing through the water in the reservoir as well as through the spray projected therefrom. The reservoir from which the water is sprayed may be fixed in an ornamental fountain, in the upper portion of the submersible vessel, or in any suitable construction adapted for use as a sprinkler for lawns and other similar places, and as hereinbefore intimated, in any form of the invention suitable apparatus is employed for supplying water to the reservoir and ejecting the same therefrom in the form of a spray, and also for projecting rays of light through the water in the reservoir and the spray ejected therefrom, and for changing the color of the light either in single colors successively or with a kaleidoscopic effect as will be hereinafter more particularly described.

In the drawing:

Figure 1 is a central vertical cross section

illustrating my present invention as applied to an ornamental fountain.

Fig. 2 is an enlarged sectional elevation of the light projecting and color changing mechanism as shown in Fig. 1.

Fig. 3 is a further enlarged plan of a plate carrier and the devices for moving the same.

Fig. 4 is a section of the part shown in Fig. 3.

Fig. 5 is a view similar to Fig. 3 showing another form of plate carrier.

Fig. 6 is an enlarged central vertical elevation of the reservoir to which water is supplied and from which the water is ejected in the form of a spray, and also through which the rays of light are projected.

Fig. 7 is a sectional elevation showing the ornamental fountain set in a suitable basin, and

Fig. 8 is a central vertical cross section and partial elevation showing the adaptation of the invention to a submersible vessel.

Referring to the drawing and particularly to Figs. 1 to 6 inclusive, it will be seen that in adapting the present invention to an ornamental fountain I prefer to employ a case 10 which acts as a stand and may be made of cast metal in any ornamental configuration. On the case 10 a basin 11 is set. On the undersurface of this basin 11 there is a rib 12 within which the upper extremity of the case fits, and these parts as will be understood, may be connected in any suitable manner. At its upper edge the basin 11 is provided as shown with a flange or a lip 13 projecting outwardly and extending downwardly therefrom.

Centrally the bottom of the basin 11 is provided with an aperture adapted to receive the cylindrical wall 14 forming part of the water reservoir. At its upper end this cylindrical wall is flanged as indicated at 15 and rests upon a boss provided therefor on the inner surface of the basin 11 with a gasket 16 of any suitable material intervening. The flanged portion 15 of the cylindrical wall 14 is interiorly screw threaded to receive a ring 17 which is turned down therein and adapted to receive a bowl 18 of cut glass or other similar transparent material which is secured in position therein by a suitable plastic material 19 or otherwise. The bowl 18 is illustrated as sub-

stantially semi-spherical and of course it may assume other configurations without departing from the nature of this invention, its function being to act as the dome or

5 top of the water reservoir.

The opposite or inner end of the cylindrical wall 14 is recessed and adapted to receive a plate 20 of glass or other transparent material which forms the bottom of a receptacle. This is maintained in position together with suitable gaskets 21 and 22 by means of a ring 23 turned down in the screw threaded portion of the recessed inner end of the cylindrical wall 14. The reservoir as just described is maintained in position in the bottom of the basin 11 by means of a nut 16' turned down on a screw threaded portion of the exterior of the cylindrical wall against the under surface of the basin

10 11. Centrally the bowl or dome 18 is provided with a nozzle 24 which is suitably secured in position therein and provided with apertures through which the water supplied to the reservoir may be ejected in the form of a spray, and the water or other liquid employed in the apparatus is conveyed to the reservoir by a supply pipe 25 connected at one end as shown in the cylindrical wall 14 of the reservoir, and at its opposite end to the discharge side of a suitable circulating pump which is not shown. In this form of the invention there is also a suction pipe 26 which extends through the bottom wall of the basin 11 and is connected at one end to the suction side of the circulating pump, and at its other end terminates at the level of the water 27 as it may be determined to maintain the same within the basin 11. This as illustrated in

15 20 25 30 35 40 Fig. 1 is preferably at the top of the inverted bowl or dome 18.

Within the case 10 there is fitted a frame 28. A motor 29 is secured in the frame by means of a bracket 30 upon which the motor is mounted or otherwise. The motor shaft 31 is provided with a worm 32 meshing with a worm gear 33 mounted on a shaft 34 which is journaled in bearings provided therefor in the frame 28. On the shaft 34 there is also mounted a pinion 35 which meshes with a gear 36 fixed on a shaft 37 also mounted in bearings provided therefor in the frame 28. On one face of the gear 36 there is a split or divided circular rib 38 and a pin 39 coacting with the parts 40 of a stop wheel mounted on a shaft 41 journaled in bearings provided therefor in the frame 28. The parts of this stop wheel bear against the periphery of the split rib 38 and the pin 39 enters slots 42 between the parts of the stop wheel so as to transmit an intermittent motion to the shaft 41 from the shafts and gears hereinbefore described as being driven by the motor 29.

65 On the shaft 41 there are also mounted

sprockets 43. Immediately above the shaft 41 a shaft 44 is journaled in bearings provided therefor in the frame 28 and on this shaft 44 there are sprockets 45. On the other side of the frame there are sets of sprockets 46 and 48 mounted respectively on shafts 47 and 49 mounted in bearings fixed in the frame 28. Endless conveyer chains 50 pass over the sprockets 43, 45, 46 and 48 and as will be understood, when the motor 29 is in operation an intermittent movement will be regularly imparted to these conveyer chains 50. In suitably spaced positions there are carrier plates 51 secured to the conveyer chains 50 by means of brackets 52 and pins 53 by which the links of the chains are connected to one another. In each of these carrier plates there is suitably fixed a color plate 54. These color plates 54 as will be understood, may be made in any suitable manner and in any desired color and secured in position in their respective carrier plates as may be found most expedient. In a predetermined number of the carrier plates 51 I may provide a circular recess 55 forming a bearing for the base of a ring 56 in which there is a circular rack 57. In the circular ring as illustrated in Figs. 3 and 4, I may employ a plurality of sector shaped color plates 58 acting in conjunction with the color plate 54 employed in the carrier plate in the manner as hereinafter described. The ring 56 with the sector shaped color plates is automatically turned when in a predetermined position, by means of a pinion 59 meshing with the circular rack 57 and mounted on a shaft 60 which is journaled in a bearing 61 mounted therefor in the upper part of one side of the frame 28. On the shaft 60 there is also a pulley 62 over which passes a belt or chain 63 also passing over a pulley 64 mounted on the shaft 37 so that when the motor 29 is in operation the shaft 60 and the pinion 59 thereon are turned continuously.

As illustrated in this form of the invention, I employ a bracket 65 so placed that an electric lamp bulb 66 may be secured in the socket carried by the bracket with the light immediately beneath the water reservoir. Secured to the frame 28 there is also a bracket 67 for supporting a reflector 68 employed in conjunction with the lamp bulb 66 to direct the rays of light to and through the water reservoir and the spray of water ejected therefrom.

In this form of the invention as shown in Figs. 1 and 7, the basin 11 may be fitted with a water discharge pipe 69 provided with a series of holes for spraying the water in the form shown in Fig. 7, this discharge pipe 69 being fitted beneath the flange 13 beneath which there is also secured a series of electric lamp bulbs 70 which may be arranged alternately in different colors, and to which