

No. 778,078.

PATENTED DEC. 20, 1904.

H. A. SHAULES.  
THEATER APPLIANCE.  
APPLICATION FILED NOV. 1, 1904.

NO MODEL.

3 SHEETS—SHEET 1.

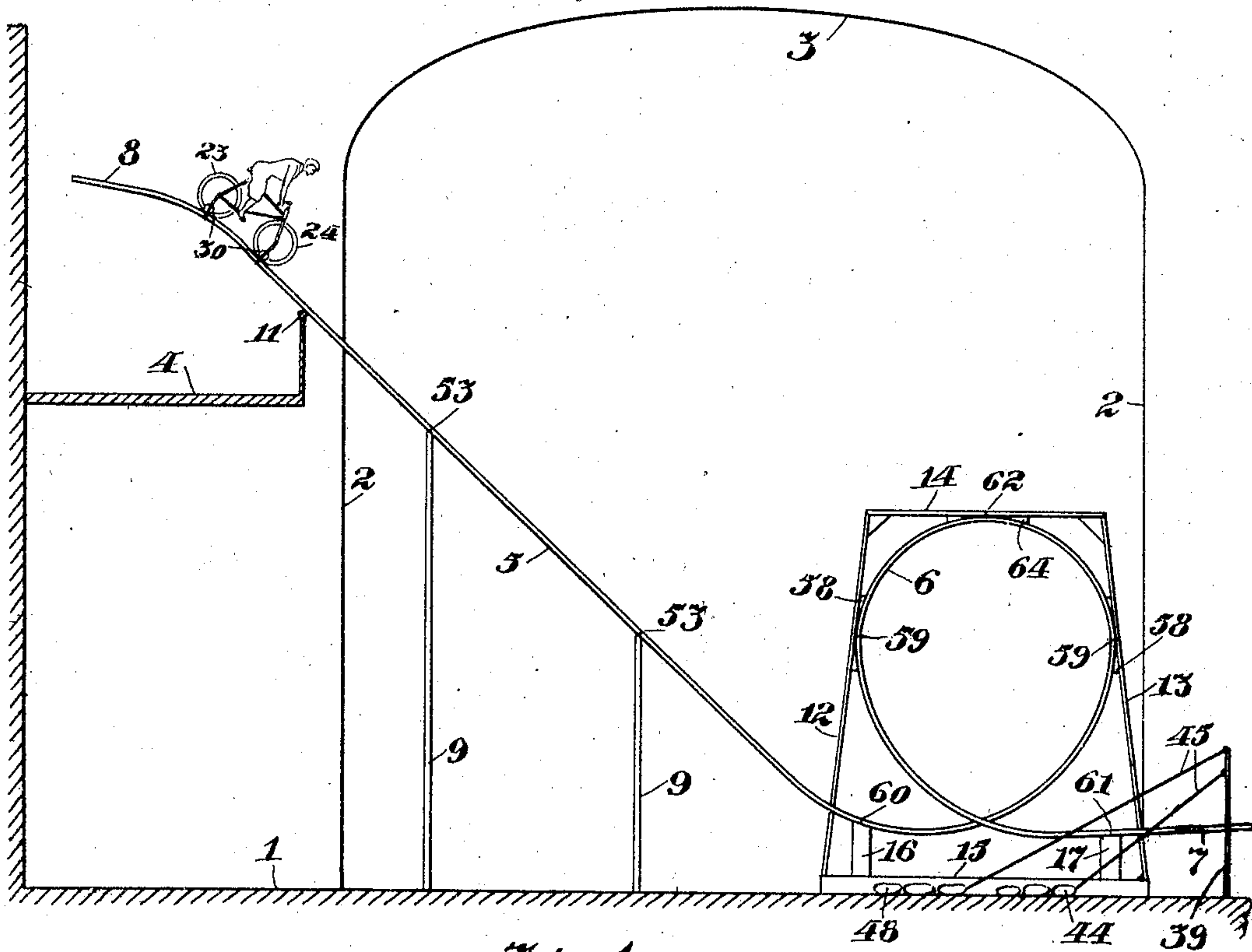


Fig. 1.

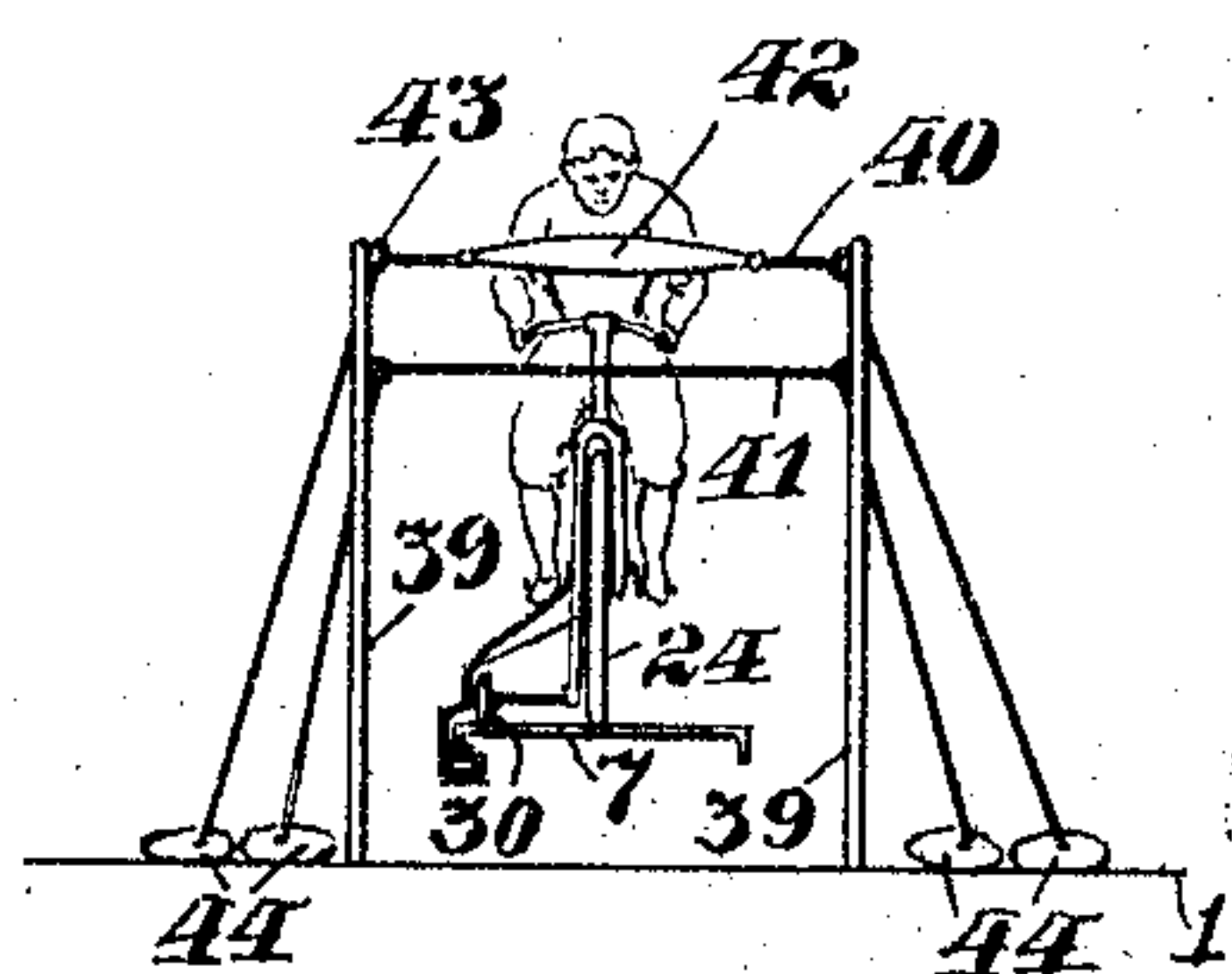


Fig. 2.

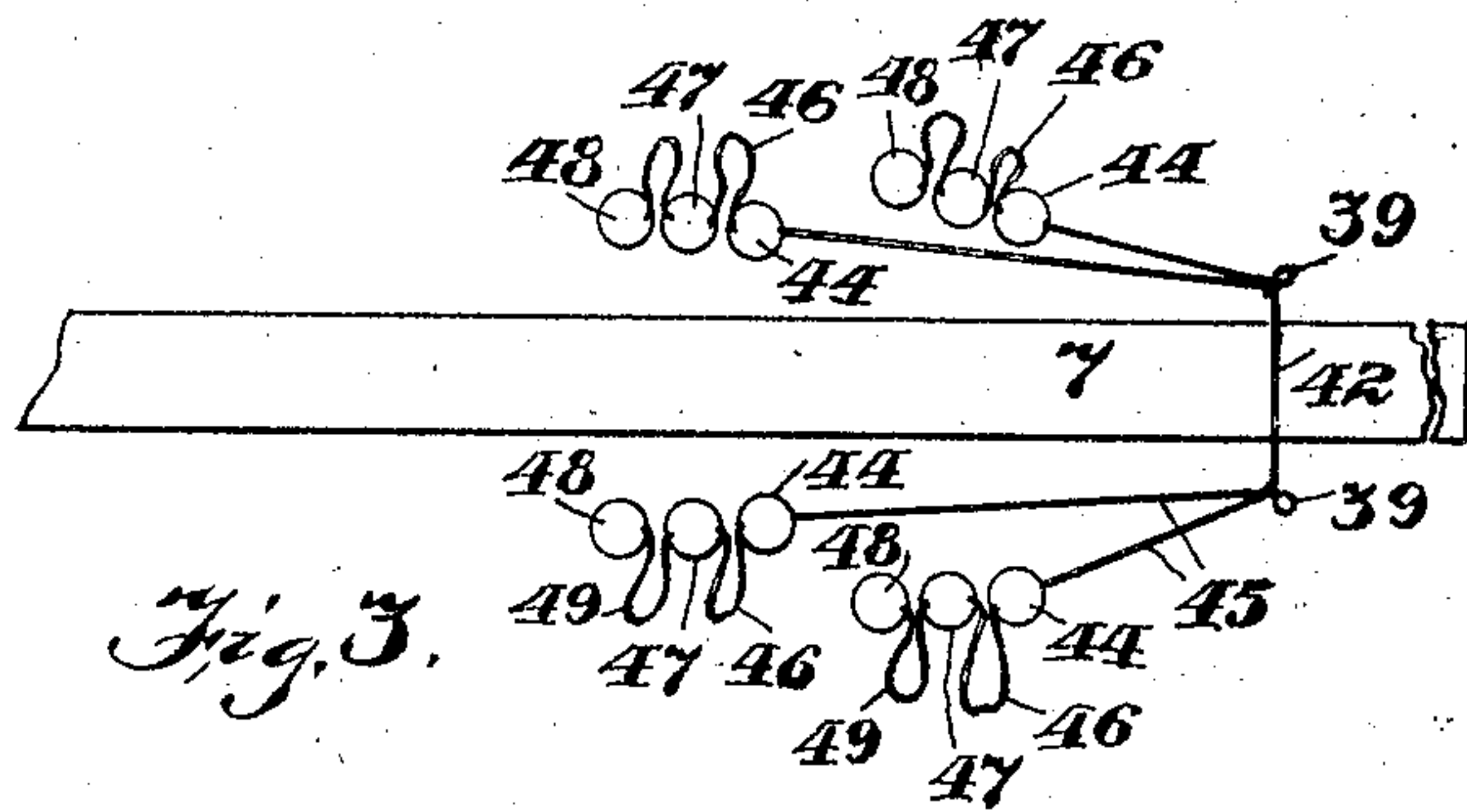


Fig. 3.

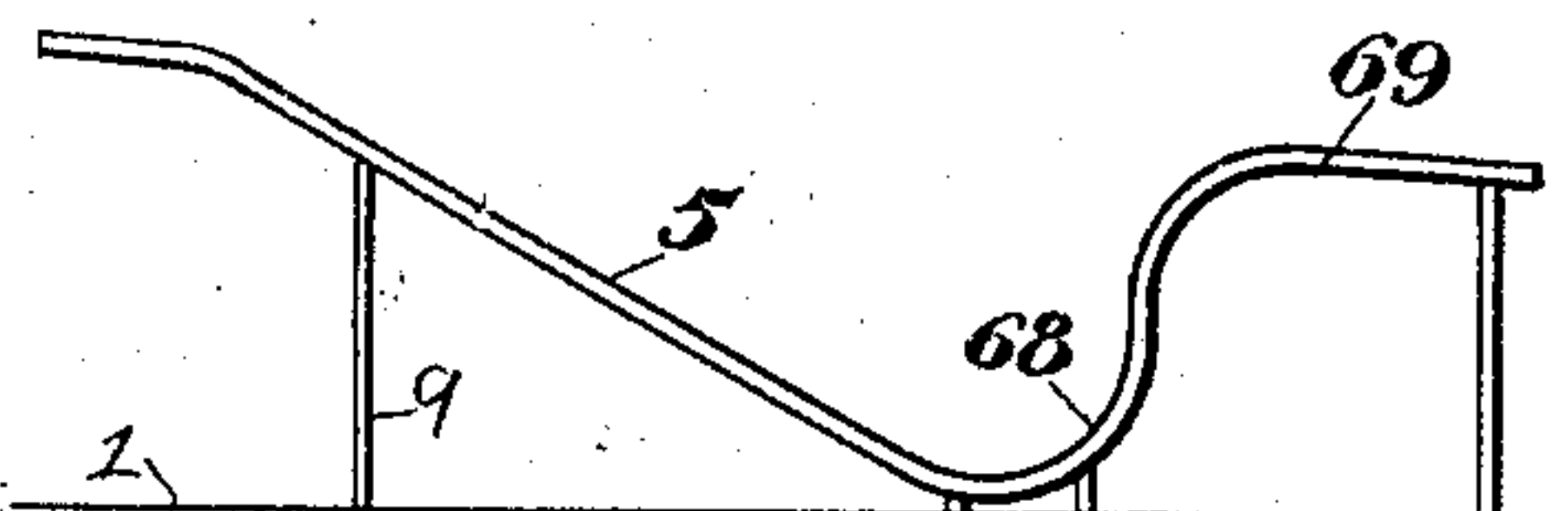


Fig. 4.

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3 SHEETS—SHEET 2.

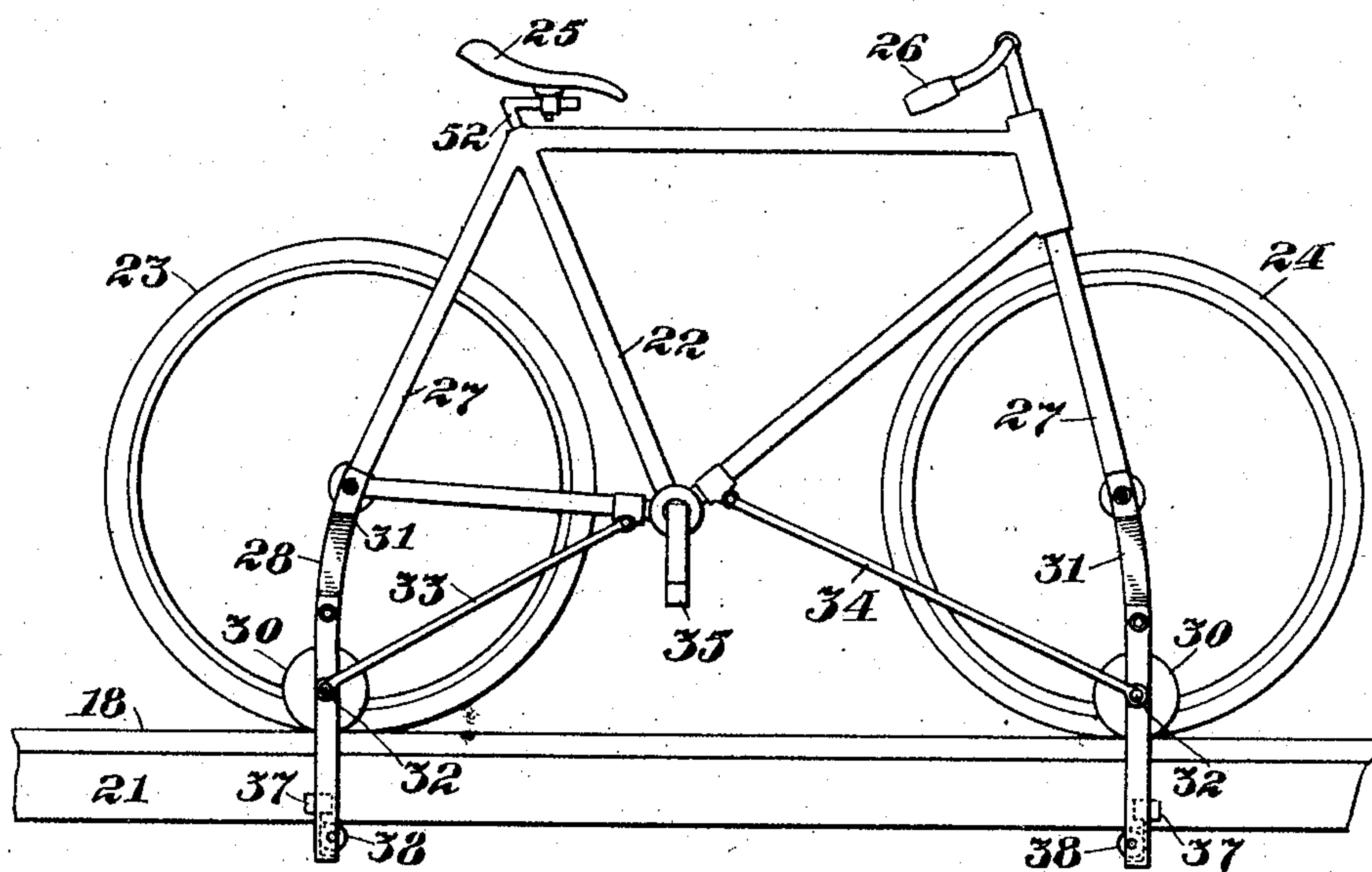


Fig. 5.

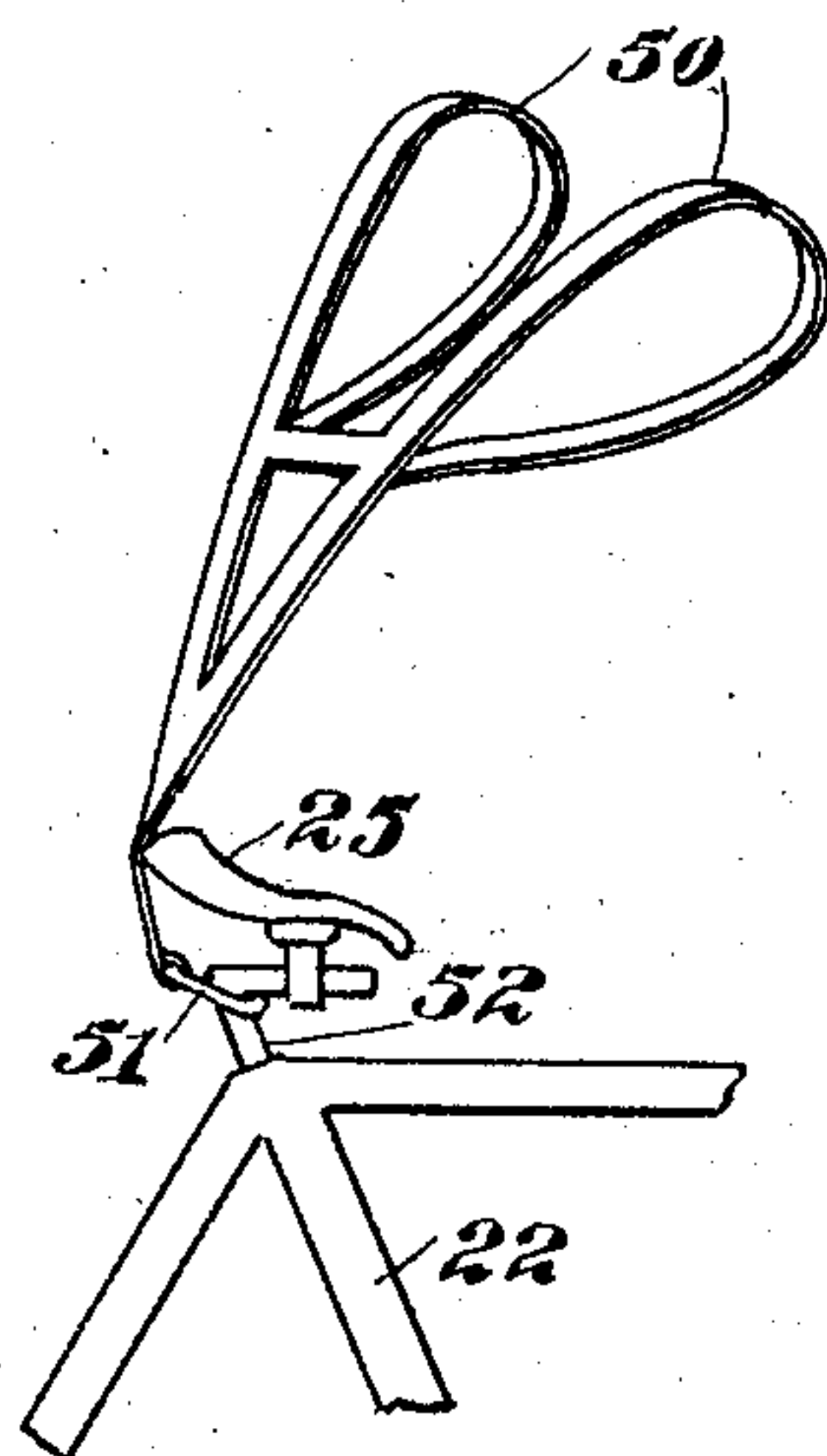


Fig. 7.

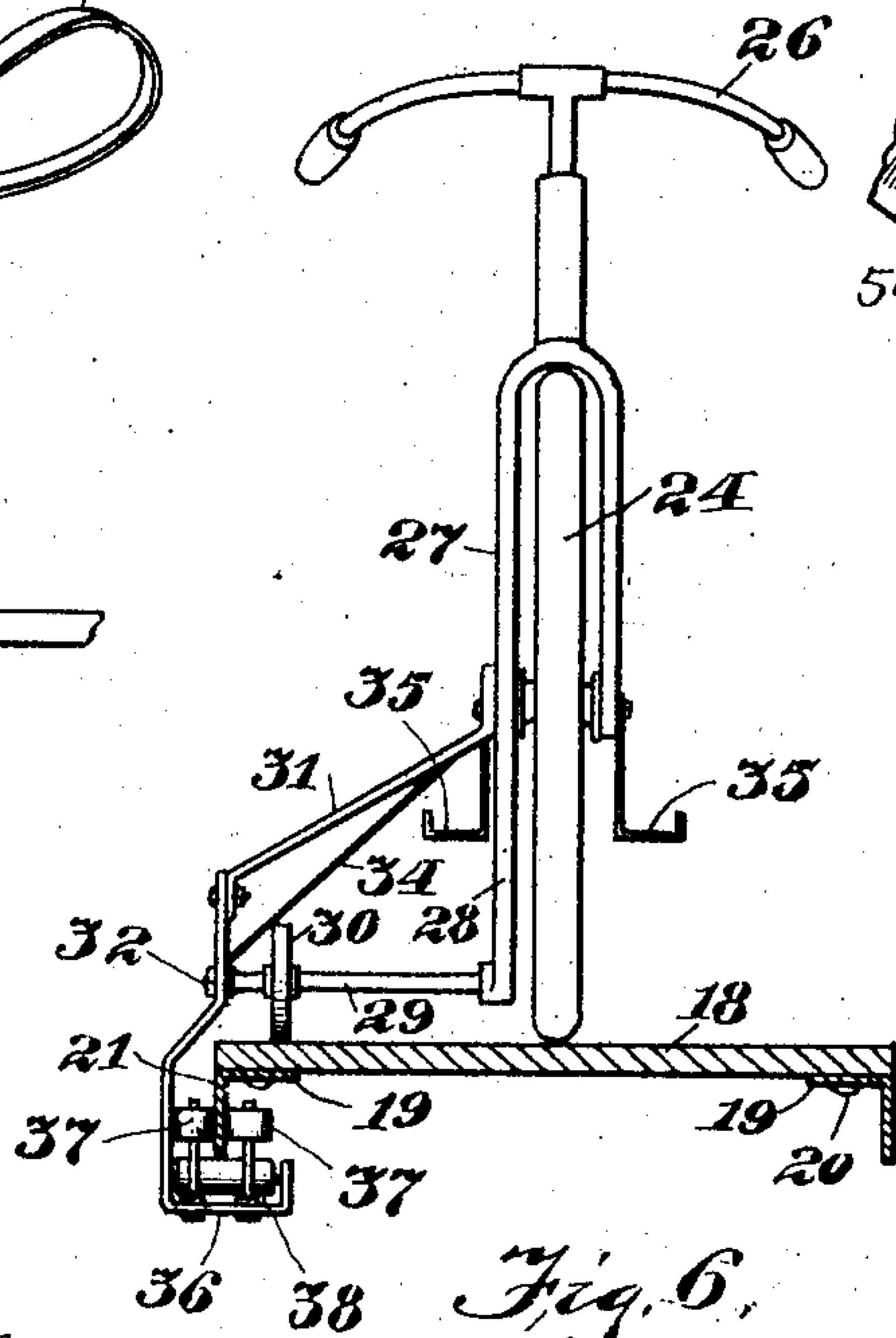


Fig. 6.

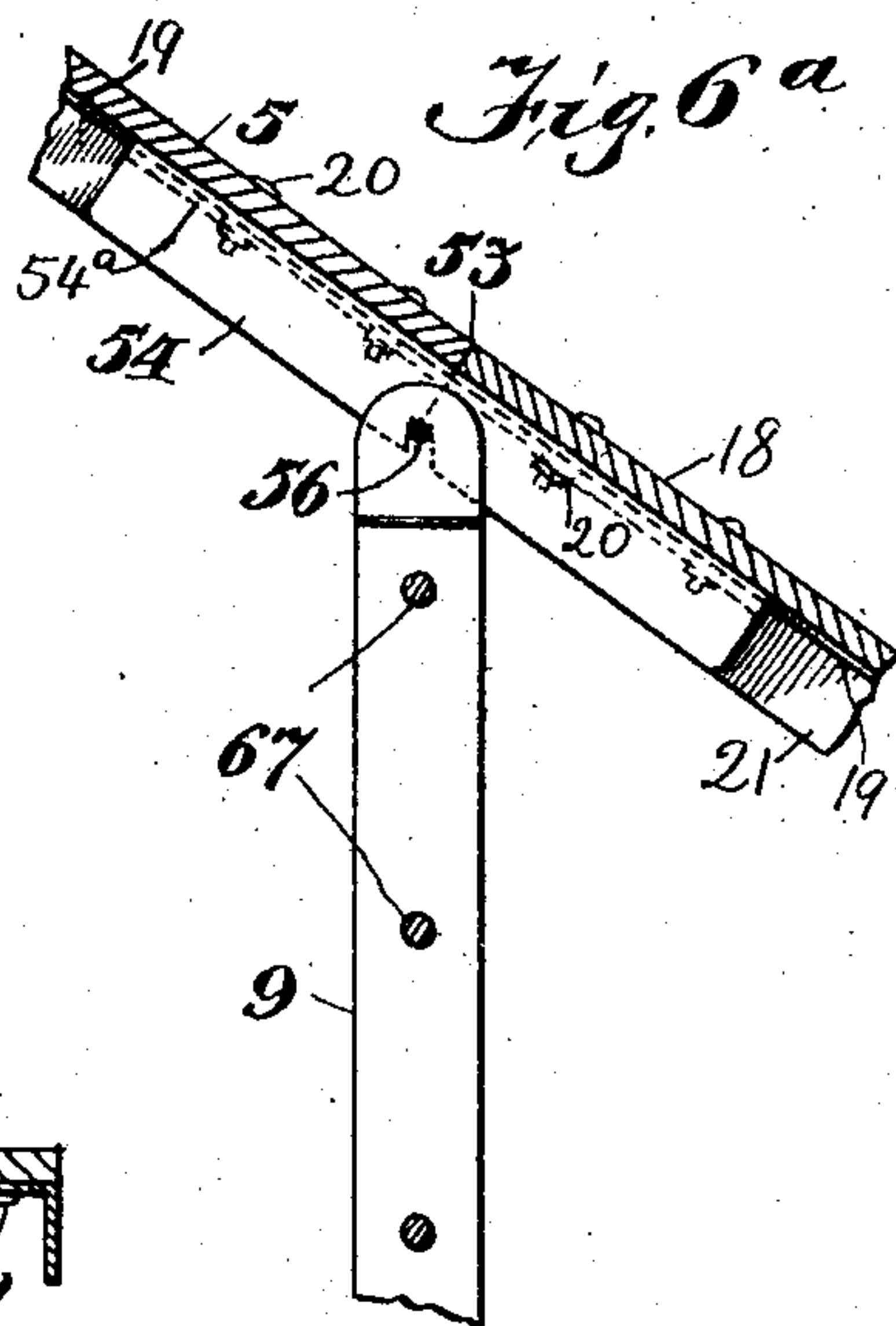


Fig. 6a.

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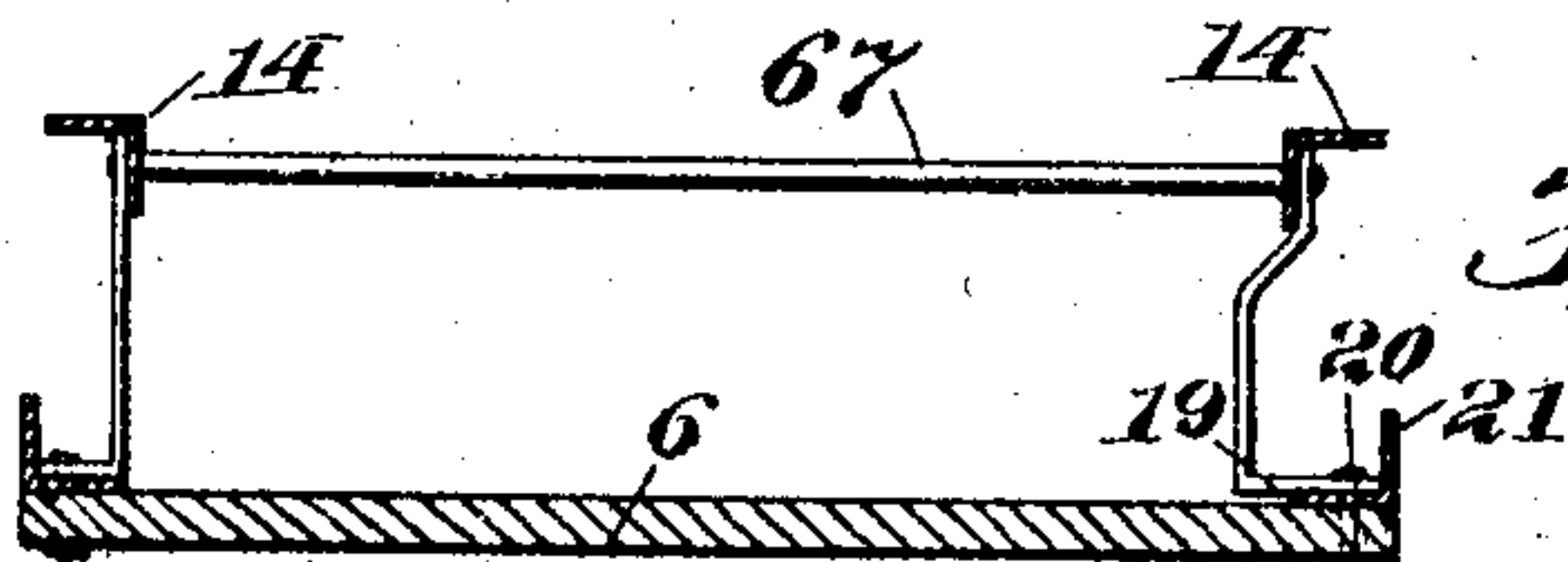
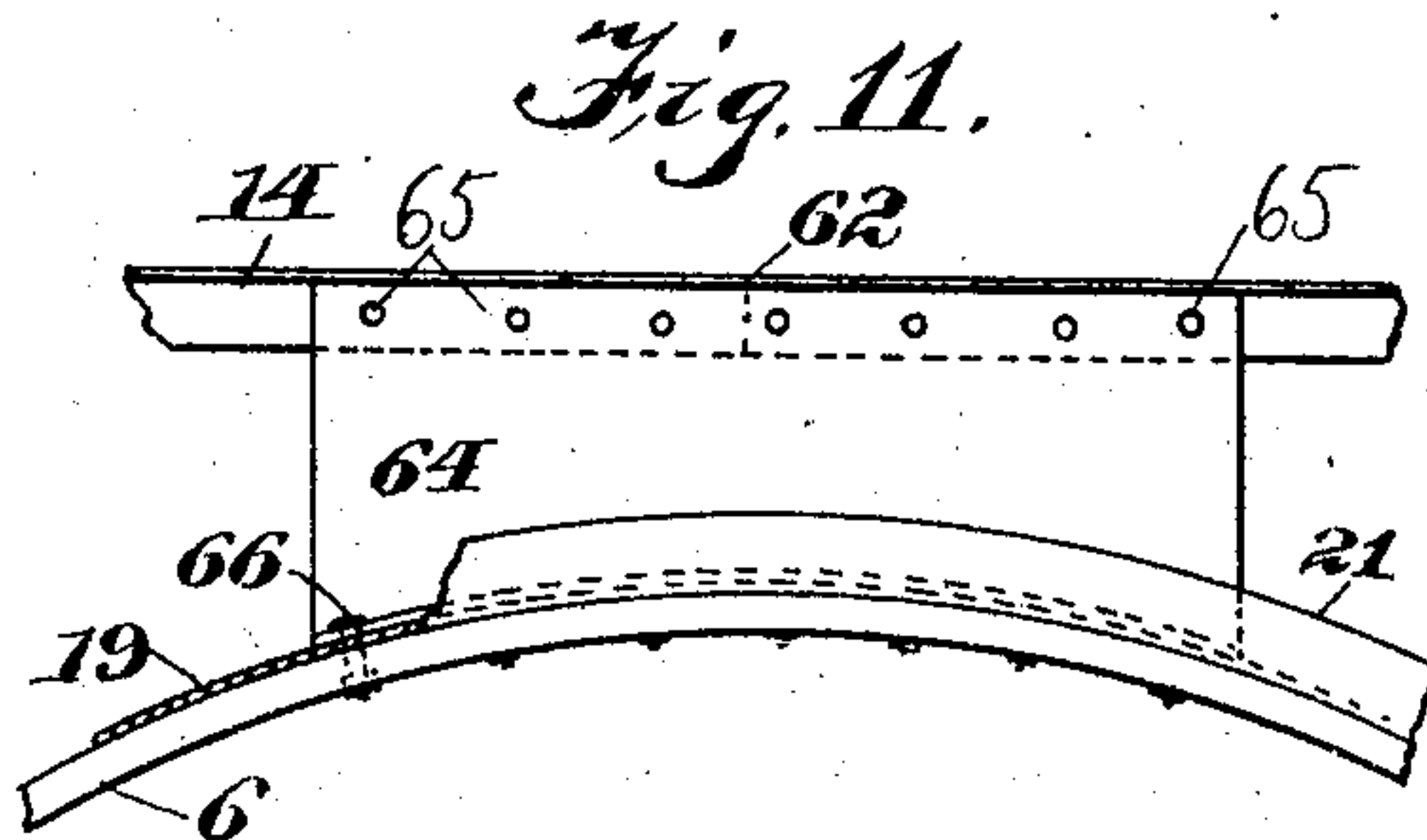
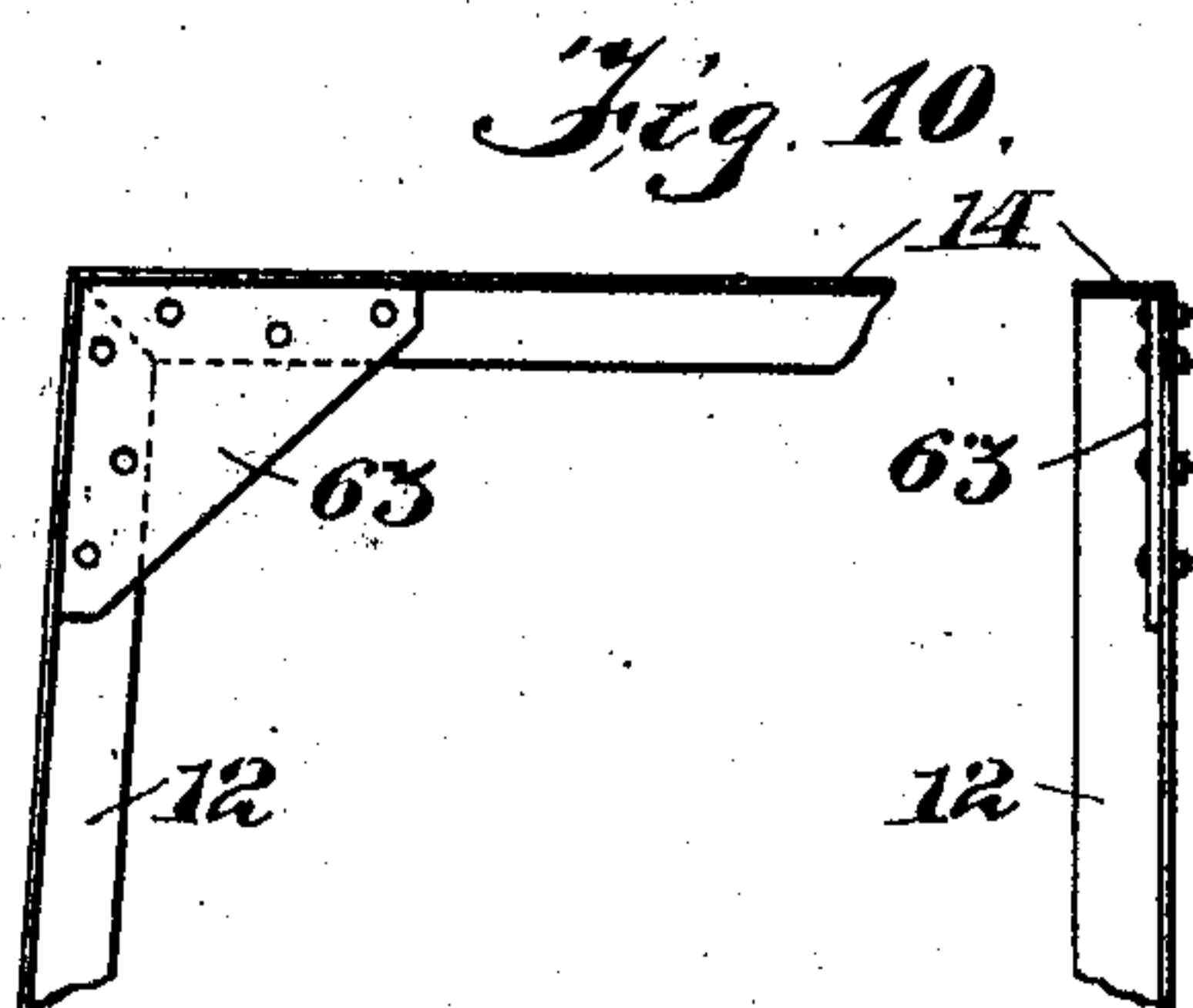
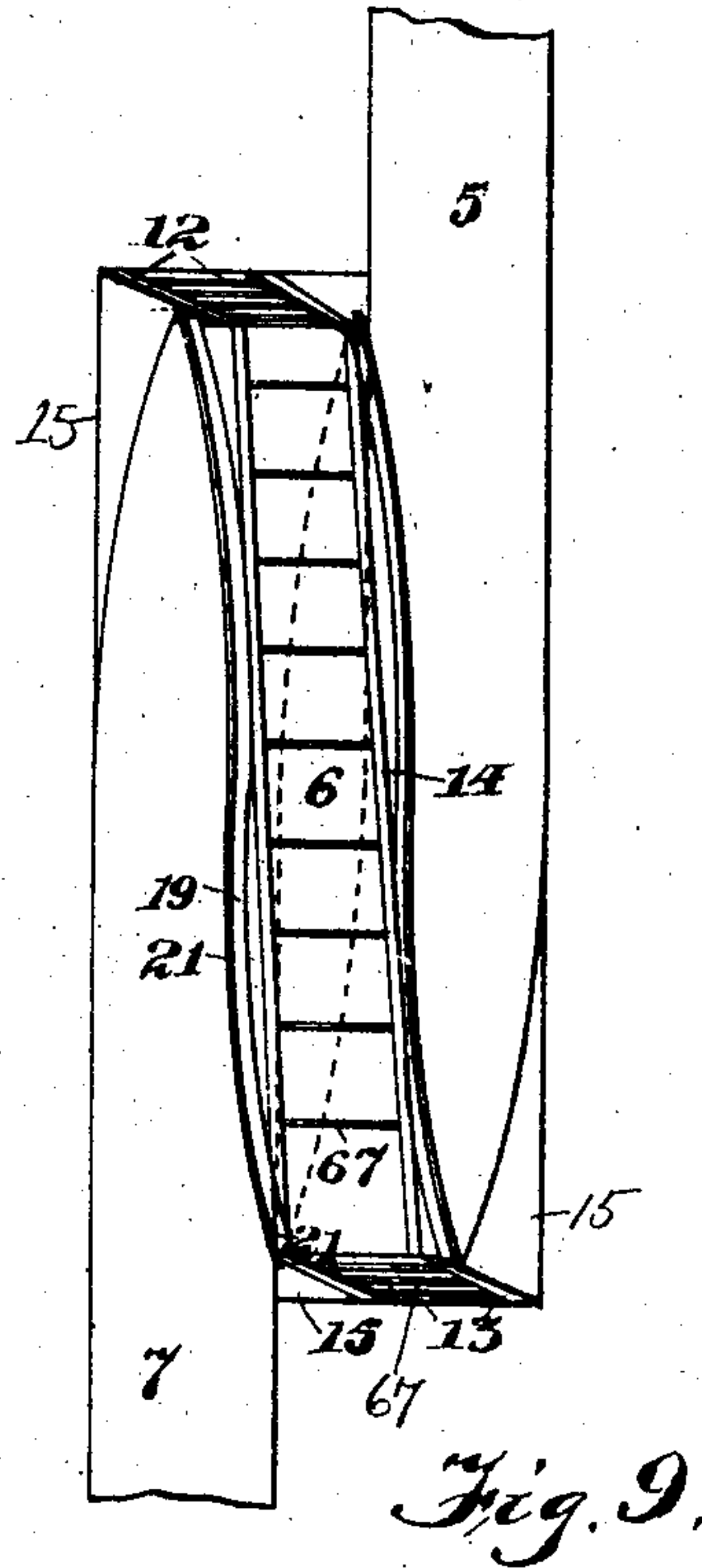
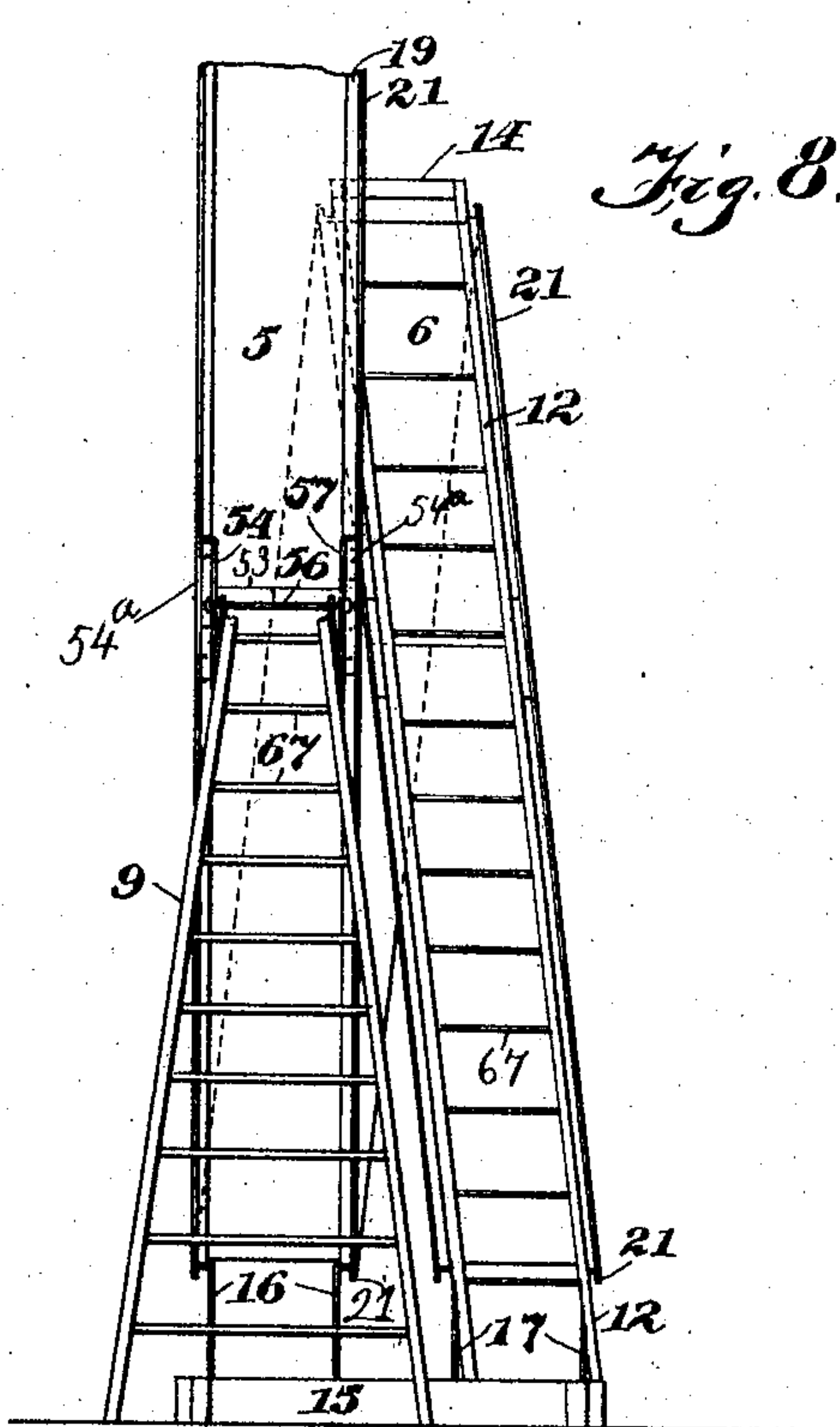
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

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TO WILLIAM H. LOCKE, JR., OF BROOKLYN, NEW YORK.

## THEATER APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 778,078, dated December 20, 1904.

Application filed November 1, 1904. Serial No. 230,954.

*To all whom it may concern:*

Be it known that I, HERBERT A. SHAULES, a citizen of the United States, residing in the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Theater Appliances, of which the following is a specification.

This invention relates to theater appliances of the kind by which an illusion is presented to the audience that the performer is executing a feat of great agility or daring.

The object of the invention is to present to the view of the audience in a theater, where the stage room is usually limited, the spectacle of a bicycle rider coasting down an incline to a loop and then up and around on the inside of the loop. This feat has heretofore been performed by riders of great skill and daring; but owing to the enormous risk of injury to the rider such exhibitions have been rare. By my invention the feat is performed in full view of the audience without assistance of any sort that can be detected by the audience, while the safety of the rider is insured, even though the loop is contracted so that the apparatus may be set conveniently upon a stage of ordinary size. Hence the absence of risk to the rider makes it practicable to present frequently to audiences in all parts of the land the exciting spectacle of a rider apparently risking his life in the performance of the feat.

In carrying out my invention I provide a race or course comprising a long and sharp incline or approach and an upstanding loop or helix. The race consists of flooring along the edges of which upon its under side run angle-irons forming flanges or ledges depending from the flooring. The bicycle (or other suitable single-track vehicle, having more or less than two wheels, if desired) is provided upon its side with an inconspicuous auxiliary frame having rolls which ride upon the floor of the race and also having rolls that engage the rear flange upon both sides and also upon its bottom edge, whereby the bicycle is prevented from either falling over sidewise or run-

ning off from the race. The main frame and wheels of the bicycle may be brightly finished, while the auxiliary frame, which is small and lies close to the floor of the race, may be finished with dull dark paint, so that it will not be noticed, especially if the stage is provided with a dark background, the attention of the audience being taken up by the wild dash of the bicycle and rider and the act being finished so quickly that the audience does not have time to look for auxiliary guiding means. The race is very narrow, and the guide-flanges are small and not noticeable and appear to be simply supports to which the flooring is attached. At the end of the race is provided means for arresting the bicycle and rider without shock. Both ends of the race are concealed from view of the audience, so that it cannot be seen how the start or finish is made. The race is made in detachable sections and detachably connected to its supports. The loop-supporting frame is also made in detachable sections. By this means it is rendered convenient to take down, transport, and set up the appliance. The bicycle or other wheel is preferably provided with a harness which may be secured to the body of the rider and concealed beneath the coat or jacket, this harness conducting to the safety of the rider, as it prevents falling off from the bicycle from any unforeseen accident.

In the accompanying drawings, Figure 1 is a view of the appliance looking toward the audience, the bicycle and rider being seen starting down the incline, but not yet in view of the audience. Fig. 2 shows the termination of the race and the means for bringing bicycle and rider to a gradual stop. Fig. 3 is a plan of the termination of the race, showing the clogs by whose action the stopping of the bicycle and rider is effected. Fig. 4 is a diagram to illustrate how a race may be constructed having only a partial loop within the scope of my invention. Fig. 5 is a side view, and Fig. 6 a front view, of the bicycle and its auxiliary guiding-frame and the relation of the latter to the race, which is shown in section at Fig. 6. Fig. 6<sup>a</sup> is a sectional detail of a joint in the race. Fig. 7 shows one form



of harness for attachment to the body of the rider. Fig. 8 is an end elevation, and Fig. 9 a plan, of the loop. Fig. 10 shows side elevation and cross-section of a corner of the loop-supporting framework. Fig. 11 shows the joint of the top of the loop to the framework, and Fig. 12 is a cross-section of parts seen at Fig. 11.

The stage of the theater is seen at 1, the proscenium-wall at 2, the proscenium-arch at 3, and fly-gallery at 4. The bicycle-race comprises an inclined approach 5 and a helical loop 6, terminating horizontally at 7, both this terminus and the top 8 of the approach being behind the proscenium-wall and out of sight of the audience. The approach is supported by standards 9 10 of different heights and at its upper portion may rest upon a rail 11, provided in the fly-gallery. The loop is supported by a framework comprising sides 12 13 and top 14, said sides being erected upon a base 15 upon the stage and the ends of the loop resting upon short supports 16 17, erected upon said base. The race throughout consists of flooring 18, secured to angle-irons at its sides or edges. Each angle-iron consists of a flange 19, secured by screws or bolts 20 to the flooring, and a depending flange 21, the flange 21, which is upon the rear of the race, (seen at the left in Fig. 6,) serving as a ledge or track, upon which run rolls that are connected to the main frame of the bicycle.

The bicycle comprises the usual main frame 22, wheels 23 24, seat 25, and handle-bar 26. One prong 27 of each of the usual front and rear wheel forks is prolonged downwardly at 28 to form a bearing for a horizontal axle 29, carrying a small roll 30. Each of said prongs is also provided with a lateral extension 31, provided with another bearing at 32 for said axle, braces 33 and 34 extending from said lateral extensions upwardly and toward each other and secured to the frame 22 near the pedals or stirrups 35. Said lateral extensions 31 are continued downwardly and bent beneath the flange 21, as at 36, and provided with small rolls 37, running in contact with the opposite sides of flange 21, and also, preferably, with small rolls 38 to engage the bottom edge of said flange. All of these rolls may have rubber tires to prevent noise, and it will be seen that they prevent the bicycle from falling over sidewise and also guide it along the race. The auxiliary frame or frames of the bicycle or other coaster may, however, be widely varied within the scope of the invention, as well as the construction of the race which guides and supports the bicycle.

At the terminus of the race are fixed posts 39, one upon each side thereof, between which are stretched cords 40 41, the upper being in position to intercept the body of the rider and being preferably provided with a pad, band, or strap 42 to prevent hurting him and the lower cord being in position to inter-

cept the main frame 22 of the bicycle. These cords pass through eyes 43 in the posts, and to their ends are attached clogs 44, which rest upon the stage. When the cords 40 41 are struck, they yield and the clogs are dragged along the stage, (said cords extending backwardly from said eyes to the clogs, as seen at 45, Figs. 1 and 3.) Attached to each of these clogs by a connection 46 is a clog 47, also resting upon the stage. The connection 46 is slack, so that the bicycle and rider first pick up the clogs 44 and then take up the slack in the connections before picking up clogs 46, so that the rider may be brought gradually to a stop. Other clogs, 48, may be added, being connected to clogs 47 by slack connections 49. The movement or dragging of these clogs along the floor and lifting some or all of them up toward the eyes 43 is sufficient to absorb the impetus of bicycle and rider and bring them to rest.

At Fig. 7 is shown a harness consisting principally of shoulder-straps 50, connected by a link 51 to the seat-post 52 of the bicycle. The arms of the rider may be slipped through these shoulder-straps, which insure that in the event of an accident he will not be thrown from the bicycle. The rider's jacket, which may be donned after the shoulder-straps are placed, will conceal them from the audience.

The mounting of the bicycle by the rider, adjusting the harness, and inspection of the running-gear all take place at the top 8 of the incline, behind the proscenium-wall, out of view of the audience. When word is given, the bicycle is released and runs rapidly down the incline, then up and around inside of the loop, and then down and along the terminal 7, where the arresting-straps 40 and 41 are encountered. When the bicycle stops, the rider is quickly unharnessed by attendants, this being done behind the proscenium-wall and out of view of the audience, and then the rider runs to the front of the stage to assure the audience of his safety. Preferably he takes along a bicycle similar in all respects to the one he has just ridden, but omitting the harness and the auxiliary gear, so that it may appear to the audience to be the very one he has just ridden.

For convenience in taking down, transportation, and setting up the race is made in sections which are detachably connected end to end. The main incline 5 is provided with two joints at 53, near the tops of the supports 9, the sections being connected by couplings 54, Figs. 6<sup>a</sup> and 8, having outturned flanges 54<sup>a</sup> underlying flanges 19 and secured by bolts 20. The supports 9, which resemble ladders in their construction, are pivotally connected to said couplings at 56, the pivot-rod being shown in the form of a bolt provided with a nut 57, thus permitting ready detachment of the supports 9.

The top 14 of the loop-supporting frame, as



shown diagrammatically at Fig. 9, is skewed in the general direction of the top of the loop, and the supports 12 and 13 may also be skewed, as seen at Fig. 8, to agree with the helical direction of the sides of the loop, whereby the support 12 may stand alongside of the lower end of incline 5 and the support 13 may stand alongside of the terminal 7, each of said supports being connected to the adjoining side of the loop by a brace 58, which also serves as a coupling to connect the joint in the loop, such joints being seen at 59. The bottom of the loop is jointed at 60 to the incline 5 and at 61 to the terminal 7, and the supports 16 17 serve also as couplings at these joints, all of the couplings resembling generally in construction that seen at Figs. 6<sup>a</sup> and 8, so that a detailed description thereof is unnecessary. The top 14 is made in two sections, the joint being seen at 62, each section being fixed by a corner-brace 63 to its associated support 12 or 13. Angle-plates 64 form couplings for the sections of the top 14, being connected thereto detachably by bolts 65, and also form braces between said top and the loop 6, being connected to the latter detachably by bolts 66. Thus it will be seen that the loop is rigidly supported, while it may be readily knocked down, packed for transportation, and set up. Each of the supports 9, 16, 17, 12, 13, and 14 may consist of a pair of angle-irons connected by rounds 67.

Variations may be resorted to within the scope of my invention—as, for instance, other forms of race may be used, one of which is suggested at Fig. 4, consisting of a main incline 5, a partial loop 68, and a terminus 69—and portions of the invention may be used without others—as, for instance, the harness (seen at Fig. 7) may be omitted.

Having thus described my invention, I claim—

1. A theatrical appliance comprising an up-standing loop having an inclined approach, and a bicycle having upon only one side an inconspicuous auxiliary guiding-frame; said loop and approach having, along the edge thereof remote from the audience, a track, and said auxiliary frame being provided with small rolls engaging said track to prevent side-wise running of the bicycle.

2. A theatrical appliance comprising an up-standing loop having an inclined approach, and a bicycle having upon only one side an inconspicuous auxiliary guiding-frame; said auxiliary frame having small rolls by the sides of the bicycle-wheels, to prevent the bicycle from falling over, and also having a guard extending under the edge of the approach and loop.

3. A theatrical appliance comprising a race in the form of an inclined approach and an up-standing loop, and a bicycle provided upon only one side with an inconspicuous auxiliary frame having means to engage the race for

both preventing the bicycle from tipping and guiding it along the race.

4. A theatrical appliance comprising a race in the form of an inclined approach and an up-standing loop, said race having a ledge or flange extending along its under side at its rear edge, and a bicycle having an inconspicuous auxiliary frame provided with parts to engage said flange upon both sides thereof.

5. A theatrical appliance comprising a race in the form of an inclined approach and an up-standing loop, said race having a ledge or flange extending along its rear edge, and a bicycle having an inconspicuous auxiliary frame provided with small rolls running upon the floor of the race by the side of the bicycle-wheels, and also provided with small rolls engaging the opposite sides of said flange.

6. A theatrical appliance comprising a race in the form of an inclined approach and an up-standing loop, said race having a ledge or flange extending along its under side at its rear edge, and a bicycle having an inconspicuous auxiliary frame provided with rolls running upon the floor of the race, upon the sides of said flange, and upon the bottom of the flange.

7. A theatrical appliance comprising a race in the form of an inclined approach and an up-standing loop, and a bicycle having front and rear wheel forks, one prong of each fork being prolonged downwardly to provide a bearing for an axle and also having a lateral extension provided with another bearing for said axle, and small rolls upon said axles.

8. A theatrical appliance comprising a race in the form of an inclined approach and an up-standing loop, and a bicycle having front and rear wheel forks, one prong of each fork being prolonged downwardly to provide a bearing for an axle and also having a lateral extension which is provided with another bearing for said axle; small rolls being provided upon said axles to run upon the floor of the race, said race having along one edge a depending flange, and said lateral extension having rolls engaging said flange.

9. A theatrical appliance comprising a bicycle having along one edge a depending flange, and a bicycle having front and rear wheel forks, one prong of each fork being prolonged downwardly to provide a bearing for an axle and also having a lateral extension which is provided with another bearing for said axle and also with rolls engaging opposite sides of said flange, small rolls upon said axles, and braces extending toward each other from said lateral extensions and fastened to the main frame of the bicycle.

10. A theatrical appliance comprising an inclined bicycle-race having along its rear edge a depending flange, and a bicycle provided with an inconspicuous guiding-frame having rolls to engage said flange.

11. A theatrical appliance comprising an inclined bicycle-race in the form of flooring and



a pair of depending flanges extending along the under side of the flooring and secured thereto, and a bicycle provided with an inconspicuous guiding-frame having a small roll  
5 to run upon said flooring and guide-rolls engaging one of said flanges.

12. A theatrical appliance comprising a race made in sections attached end to end and consisting of an inclined approach having two  
10 joints, couplings at said joints, supports pivoted to said couplings, an upstanding loop, a terminal, joints at the lower portions of said loop between the same and said approach and said terminal, supporting-couplings at the last-  
15 mentioned joints, a skewed framework comprising skewed uprights and a skewed top, braces connecting the sides and top of said loop to said framework, said loop being jointed at the sides and coupled at the joints by  
20 the side braces, and the top of said framework being jointed and coupled by the top brace, and a bicycle provided with an auxiliary guiding-frame adapted to said race.

13. A theatrical appliance comprising a race,  
25 a bicycle, mechanical guiding means for the bicycle, and an obstruction in the path of the bicycle for engaging the same, said obstruction being constructed to yield when struck by the bicycle and to bring the bicycle and  
30 rider gradually to rest.

14. A theatrical appliance comprising a race, a bicycle, mechanical devices for guiding the bicycle along the race, a yielding obstruction in the path of the bicycle at the termination  
35 of the race, and clogs connected to said obstruction.

15. A theatrical appliance comprising a race,

a bicycle, a yielding obstruction in the path of the bicycle at the termination of the race, a clog connected to said obstruction, and a  
40 second clog connected to the first by a slack connection.

16. A theatrical appliance comprising a race, a bicycle, a flexible obstruction crossing the path of the bicycle at the termination of the  
45 race, clogs connected to the ends of said flexible obstruction, and a clog connected to each of said clogs by a slack connection.

17. A theatrical appliance comprising a race, a bicycle, two cords crossing the race at the  
50 termination of the latter, one cord mounted at a height to intercept the framework of the bicycle and the other cord being mounted higher so as to intercept the body of the rider, a clog connected to each end of each cord, and  
55 a clog attached by a slack connection to each of said clogs.

18. A theatrical appliance comprising a race in the form of an upstanding loop and an approach, said approach being inclined, sup-  
60 ports for said approach and said loop, said race being formed in sections detachably connected end to end, a bicycle having an inconspicuous auxiliary guiding-frame having means to engage the race at its edge portion, and a  
65 yielding obstruction crossing the path of the bicycle at the end of the race, said obstruction being provided with means for bringing the bicycle and rider gradually to rest.

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