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2,994,969

APPARATUS FOR PRACTICING BOWLING

Filed Dec. 29, 1959

FIG. 1.

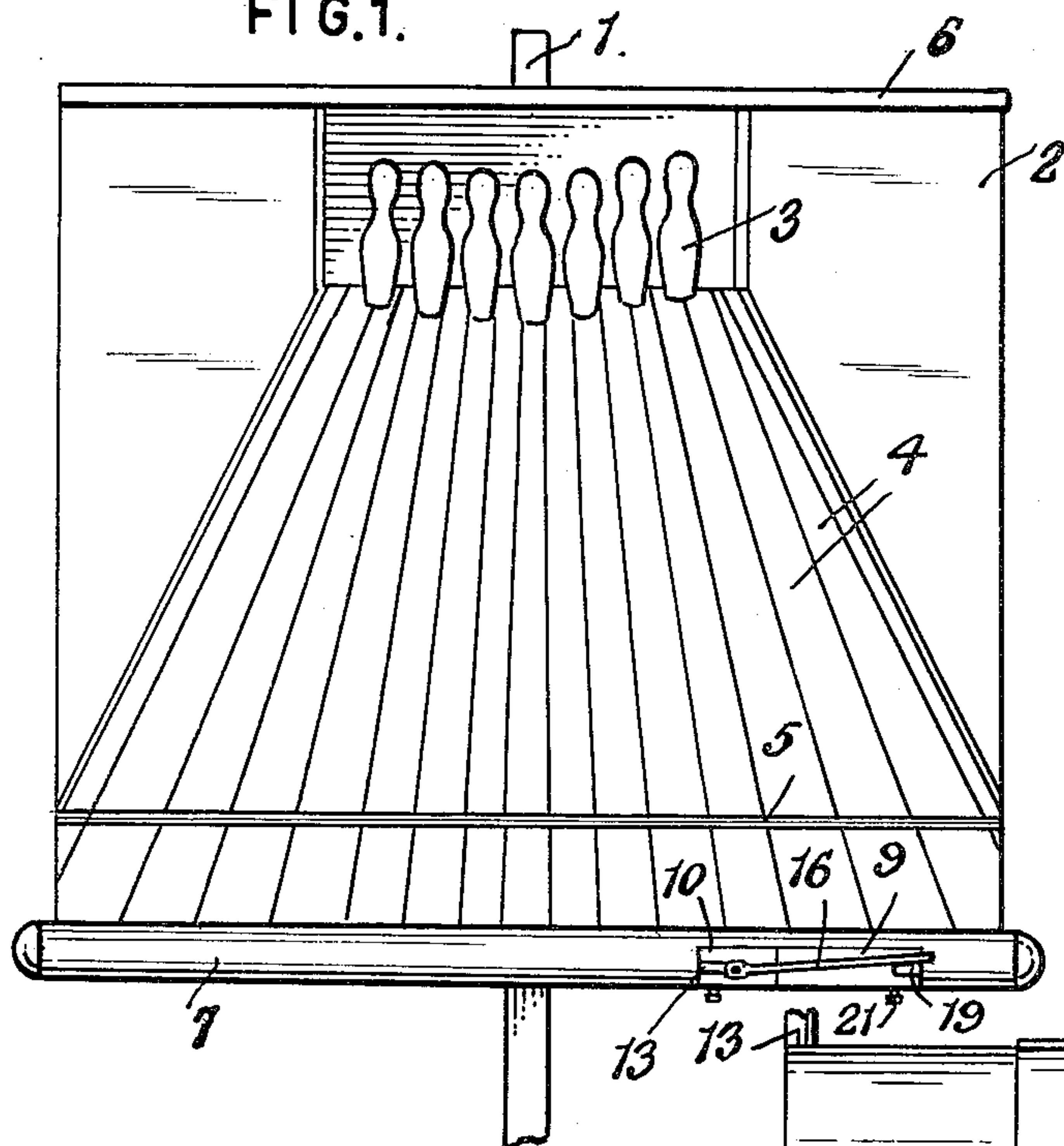


FIG. 4.

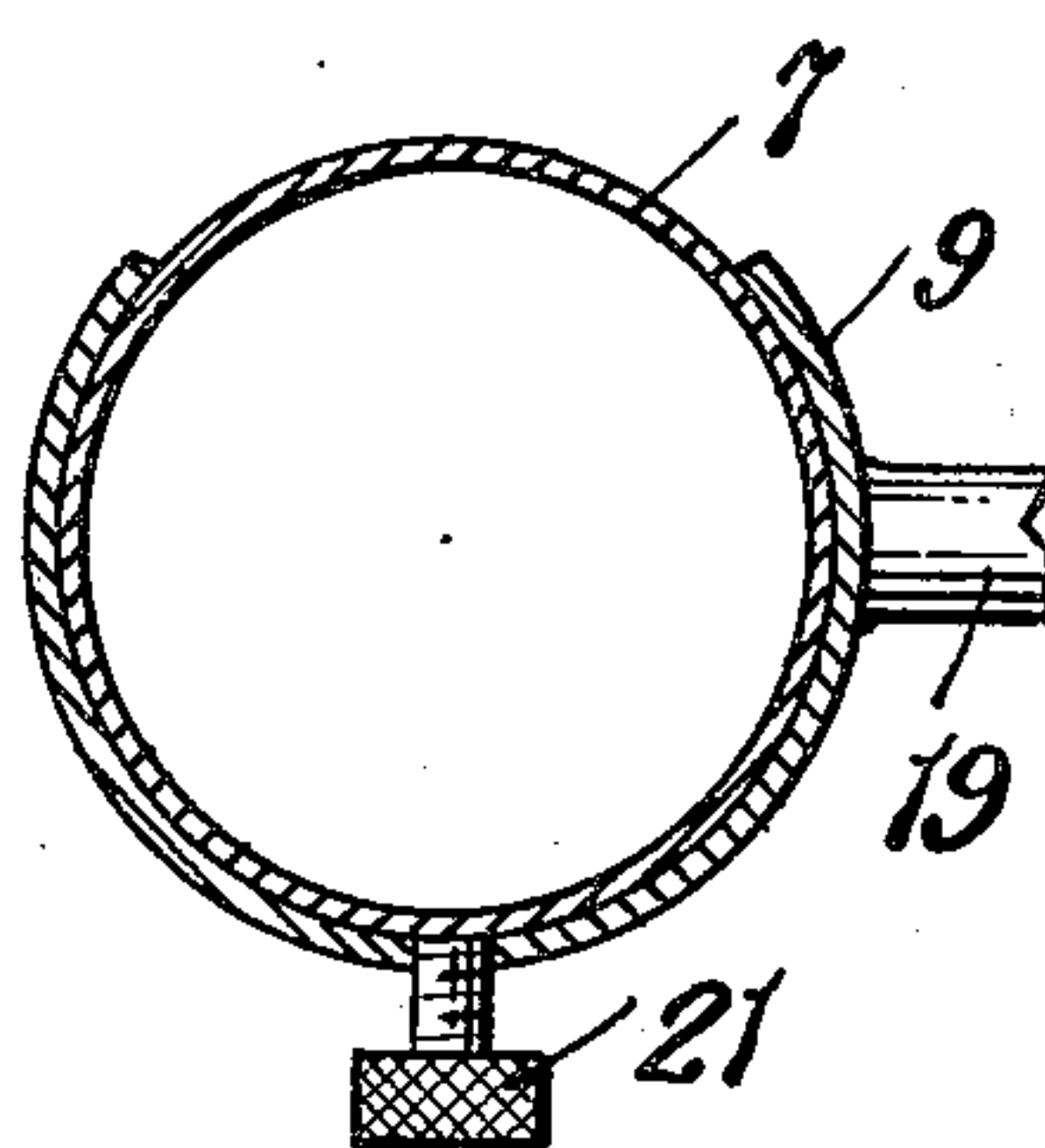


FIG. 5.

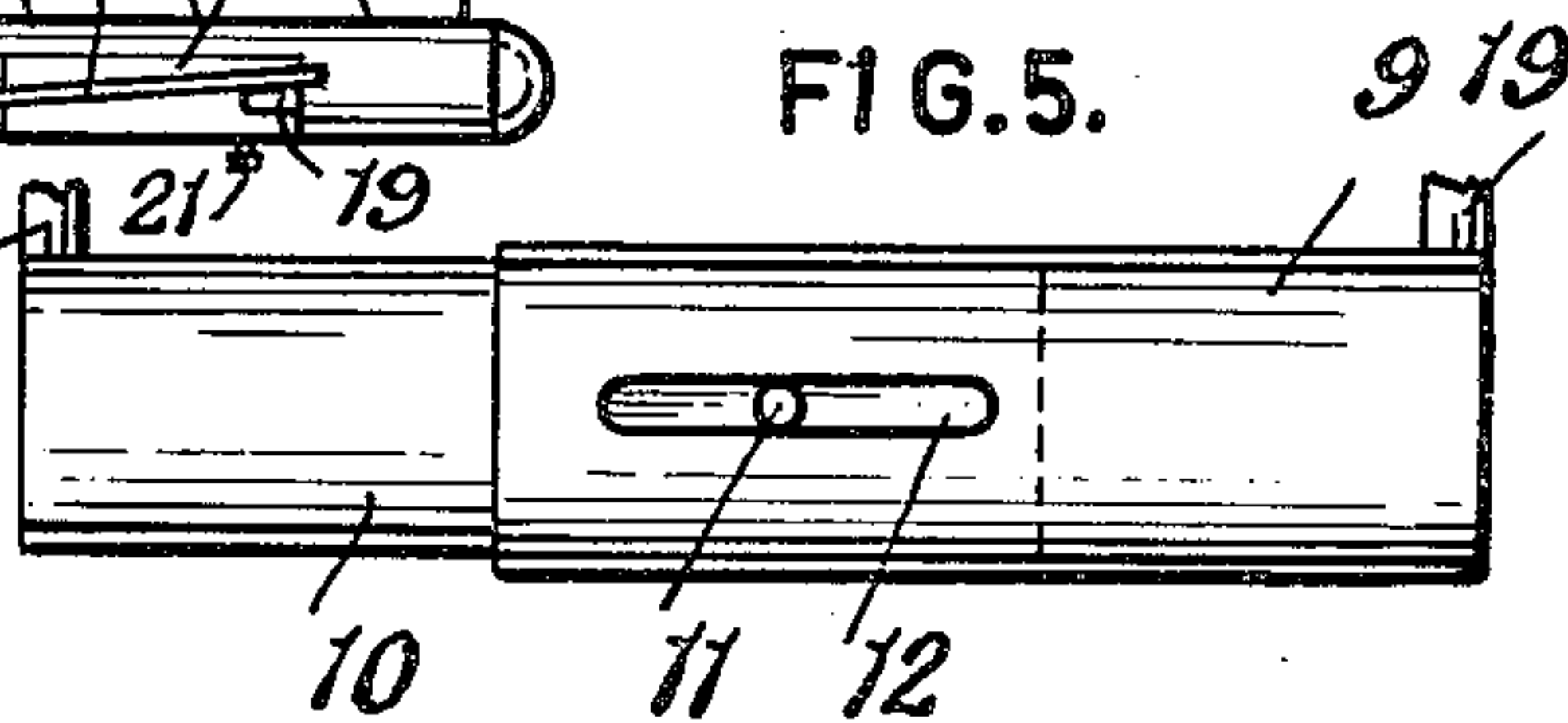


FIG. 2.

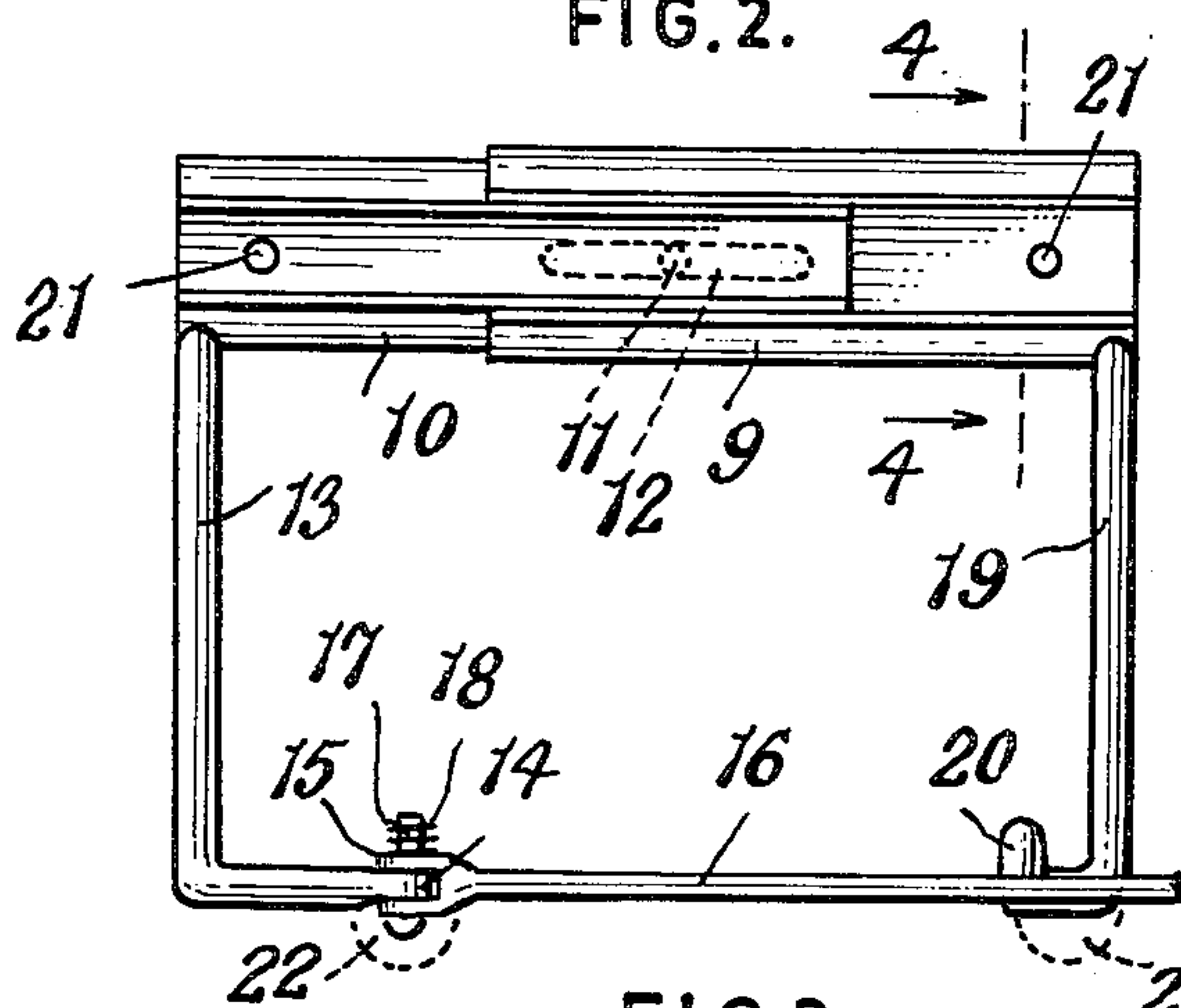


FIG. 6.

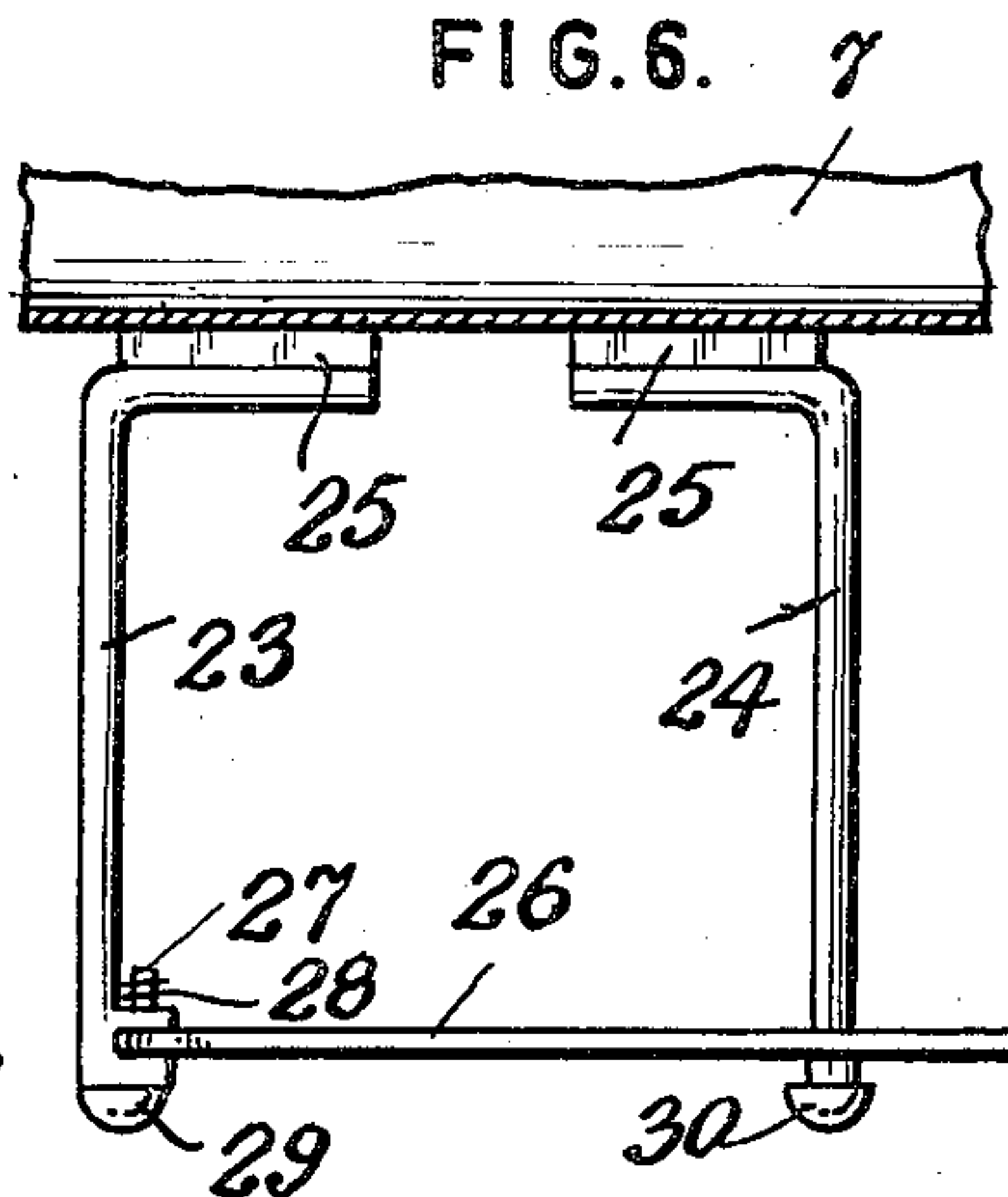
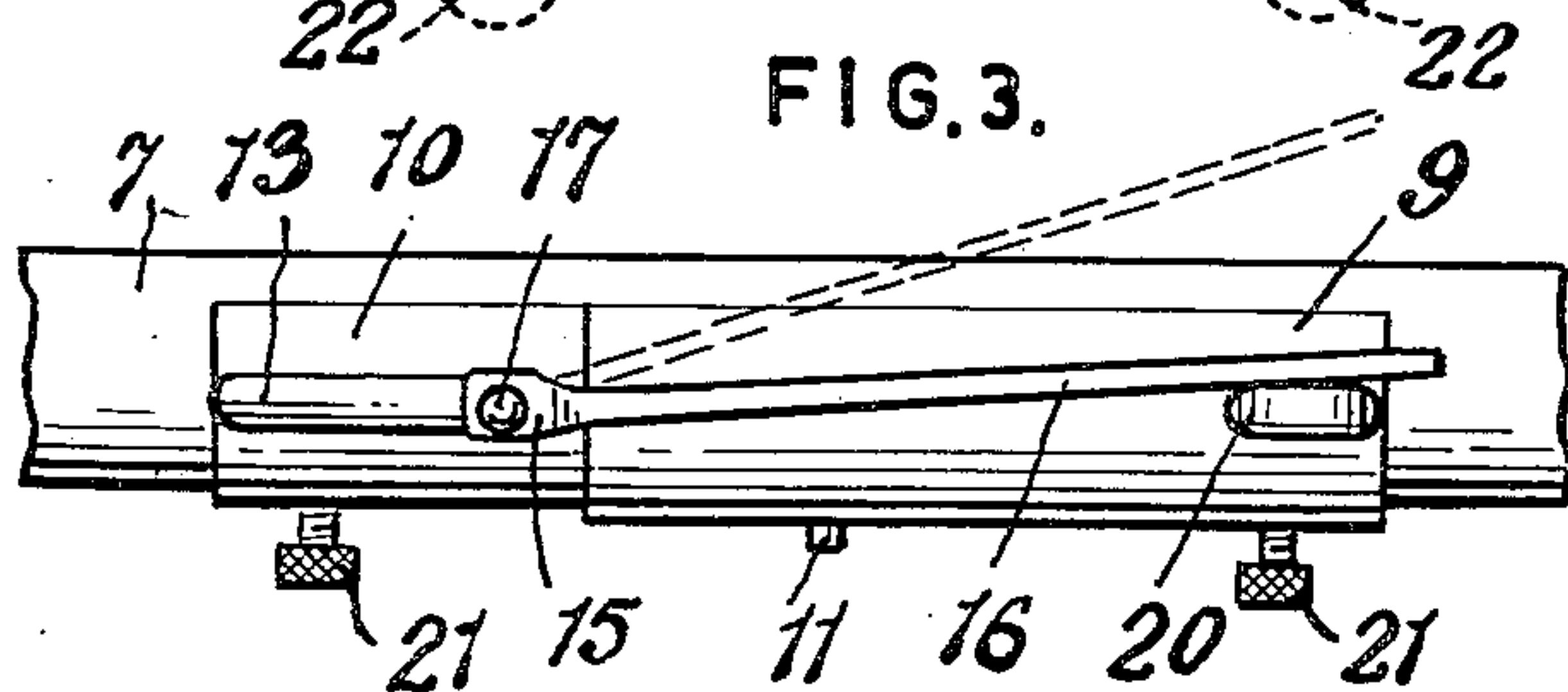


FIG. 3.



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## APPARATUS FOR PRACTICING BOWLING

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This invention relates generally to apparatus for practicing bowling and more particularly to the use of such apparatus for the instruction and training of bowlers in acquiring and perfecting the correct form to be used while engaging in such activity.

The invention has as an object to provide a simple and reliable apparatus which may be placed on the floor at any convenient location where one desires to practice bowling and thereby form the correct habit of movement for engaging in such activity.

A further object of my invention is to provide a simple and reliable apparatus which will enable the user thereof to practice bowling without incurring the expense or inconvenience of travelling to the bowling alley.

A still further object of my invention is to provide a simple apparatus which will enable the user thereof to practice bowling without the use of a ball, and thereby acquire skill and perfection in such activity.

A further object of my invention is to provide a reliable apparatus which teaches the user thereof the exact instant for releasing the bowling ball.

A further object of my invention is to provide a simple apparatus which teaches the user thereof the exact position along the alley for releasing the ball.

A further object is to provide means for adjusting the training device of my apparatus to the individual needs and peculiarities of each bowler.

Other objects and advantages of my invention will be readily apparent as it is better understood from the following description, which when considered in connection with the accompanying drawings illustrate preferred embodiments thereof.

The foregoing objects are accomplished by placing the following described elements in combination: an adjustable foldable screen supported on a stand or other means, on which is reproduced the simulation of a bowling alley, showing the pins, the gutters, the foul line and the longitudinal boards, together with means for holding the screen in an extended position when in use and in a rolled position when not in use, and a training device adapted to be detachable and movably mounted to the said screen so that it may be positioned at any selected point along the width of the simulated bowling alley, said training device protruding therefrom so as to permit the free swinging of the hand therethrough without same coming in contact with the screen, and having an adjustable pivoted swingable rod to be actuated by the movement of the hand passing through the said training device.

The accompanying drawings illustrate a preferred embodiment of my invention, in which:

FIG. 1 is a front elevational view of the simulated bowling alley and the training device used in connection therewith;

FIG. 2 is a top plan view of the training device;

FIG. 3 is a front elevational view of the same;

FIG. 4 is a sectional view taken substantially on the line 4—4 of FIG. 2, looking in the direction of the arrows, and showing the device fitted on the cross member of the screen;

FIG. 5 is a bottom view of a portion of the training device, and

FIG. 6 is a top plan view of another embodiment of the invention and in which magnetic attaching means is employed.

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1 indicates an upright or support for carrying the screen 2 on which is printed or otherwise reproduced the simulation of a bowling alley. This simulation or reproduction includes the pins 3, flooring 4, foul line 5, and such other elements as may be necessary to faithfully reproduce the alley on the screen.

The screen 2 may be supported on upright 1 in various ways and the supporting means includes an upper cross member 6 and a bottom cross member 7, the latter being preferably, but not necessarily, cylindrical and hollow to thereby accommodate the screen 2 when in its rolled or stored condition.

The training device is adapted to be detachably and movably attached to the lower cross member 7 so that it may be positioned at any selected point along the length of said member. In the form shown in FIGURES 1 to 5, inclusive, it includes a pair of attaching members in the form of split sleeves and composed of springy material so that they can be sprung on and will resiliently grip the cross member 7. One of these sleeves is indicated at 9 and the other at 10 and they may be telescoped to a desired extent to thereby bring the frame arms 13 and 19 closer together or farther apart. The pin shown at 15 provided on the sleeve 10 is guided in a slot 12 in sleeve 9 and it can be used to hold the two sleeves together, but permit of their axial adjustment. Rod 13 forming part of the frame extends from sleeve 10; it is flattened at one end as shown at 14 to receive the clevis 15 provided on the end of the swinging rod 16. 17 is the pivot pin and the rod 16 is biased to its closed position by the torsional spring 18. Rod 19 is the stop member of the frame and it has a bent end 20 against which the pivoted rod 16 abuts when in its closed position. Set screws 21 may be used to hold the sleeves in adjusted positions and also serve to keep the device from sliding along the length of the cross member 10.

In FIG. 6 the magnets 25 fasten frame members 23, 24 to cross member 7 or other support. Pivoted rod 26 is secured by pin 27 to member 23. Both members 23 and 24 may have protective rubber tips 29, 30 and similar rubber tips 22 are shown in FIG. 2.

From the foregoing description the use of my apparatus for practicing bowling will be readily apparent for those skilled in such activity. However, for those persons who are not so skilled the following explanation is offered. In making use of my novel apparatus I first open the screen 2 on which is reproduced the simulated bowling alley as shown in FIG. 1. The screen is attached to a support 1 which rests on the floor, or alternately may be hung from the wall. The position of the foul line shown on the screen is adjusted vertically for each bowler, so that the imaginary ball is released by the bowler just in back of this line. Therefore, for a tall person the screen must be raised to a greater height than that used by a short person. With experience and use of my novel apparatus the proper position of the screen will become readily apparent to the user.

I next fasten the training device to the cross member 7 and then position the same along the cross member 7 at the approximate location along the bowling alley where the ball is to be released. This location will, of course, vary with each individual bowler; for example, a bowler who throws the ball with his left hand will position the training device on the left side of the screen, whereas a person who uses his right hand for throwing the bowling ball will position the training device on the right side of the screen. Furthermore, a person who normally throws a straight ball will set the training device more towards the center of the screen, while a person who throws a hook ball, using his right hand, will position the training device more towards the right outer edge of the screen. Again, the exact location of the training device in rela-



tion to the screen must be determined experimentally for each individual bowler, but the position thereof will become readily apparent after using my novel device and practicing at a regulation bowling alley. Having now determined the position of the training device in relation to the simulated bowling alley, the set-screws 21 are tightened to hold same in its approximate proper position.

As can be seen from FIGURES 2 and 6, the training device consists of a metal frame having projecting arms 13 and 19 connected together by swinging rod 16, the frame protruding out from the screen so that as the hand swings through the frame it will not come in contact therewith. Swinging rod 16, normally closed, is made to swing about a pivot 17 against a torsion spring 18 as the hand in its upward movement comes in contact therewith. The size of the opening between the projecting arms 13 and 19 can be adjusted by sliding the sleeve 9 into sleeve 10, thereby bringing projecting arm 13 closer to, or further away from, projecting arm 19. Greatest accuracy will be obtained from the use of my novel device when the opening 16 is just large enough to permit the hand to pass therethrough without touching the sides of the projecting arms 13 or 19. However, for the inexperienced bowler a wider opening should be used until greater skill is achieved in the use of my novel practicing device. The final adjustment of the opening between the projecting arms 13 and 19 is made by adjustment of screws 11 and 21.

FIG. 6 of the drawing indicates an alternate means for attaching the training device to the bottom cross member 7. Each frame arm 23 and 24 has its individual magnet 25 so that it may be positioned at any selected point along the length of the cross member 7; also, the frame arms 23 and 24 may be positioned in relation to the other, so that the space between them is closer together or further apart. Protective rubber tips 29 and 30 may be fastened to the frame arms 23 and 24 to protect against injury to the bowler.

Obviously, other means may be employed to support the training device; for example, the training device may be supported on a stand which rests on the floor, and which is separate and apart from the screen or the bottom cross member 7.

To practice bowling with the use of my apparatus the user first assumes the position back of the foul line that he would take if he were at a regulation bowling alley. As he moves forward his bowling arm is to the rear, holding the imaginary ball. Just prior to reaching the training device he swings his arm forward in the identical manner that he would use if he had a bowling ball in his hand. As his arm swings up to release the imaginary ball it comes in contact with swinging rod 16, the force thereof causing the rod to pivot about the pin 15 against the torsion spring 18. When the hand touches the swing rod 16 this is the signal for the bowler to release the imaginary ball. If all adjustments are properly made as herein provided the ball should be positioned on the alley just in front of the foul line at the proper position of the alley, so as to knock down all of the pins on the one roll.

My novel practice device is designed to teach the user at just which instant to release the ball and the position along the alley where the ball should be released. After the movement of the legs and arms have been practiced in the manner above described, it will be obvious that the coordination of all parts of the body will become automatic and the bowler will obtain a degree of accuracy which will gradually approach perfection.

Although I have shown and described embodiments of my invention, I do not desire to be limited to the particular embodiments disclosed herein and I intend in

the appended claims to cover all modifications which do not depart from the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A training device comprising a frame member, generally rectangular in shape, a bottom screen support member, means for supporting said frame member to the bottom screen support member, the frame member being adjustable at any selected point along the bottom screen support, said training device having outwardly extending arms at each end thereof connected by a swinging rod member pivotal about one arm against a spring capable of being actuated by the upward movement of the hand of the bowler as same come in contact with the swinging rod member, the size of this opening between the arms adapted to be adjustable.

2. A device for the practice of bowling comprising a screen having reproduced thereon the simulation of a bowling alley, means for supporting the screen in an extended position, a training device comprising a frame member, generally rectangular in shape, adapted to be adjustable at any selected point along the bottom of the screen, said training device being in front of the screen and having outwardly extending arms at each end thereof connected by a swinging rod member pivotal about one of the said arms against a spring capable of being actuated by the upward movement of the hand of the bowler as same comes in contact with the swinging rod member, the size of the opening between the arms of the said training device adapted to be adjustable.

3. A practice bowling device comprising a screen on which is reproduced a simulation of a bowling alley, means for supporting the same in an extended position and adaptable to be adjustable in an up-and-down position, a training device comprising a frame member, generally rectangular in shape, adapted to be adjustable at any selected point along the bottom of the screen, said training device being positioned in front of the screen and having outwardly extending arms at each end thereof, connected by a swinging rod member pivotal about one of the said arms against a spring capable of being actuated by the upward movement of the hand of the bowler as same comes in contact with the swinging rod member, the distance between the arms of the training device adapted to be adjustable.

4. A practice bowling device comprising a screen on which is reproduced a simulation of a bowling alley, means for supporting the screen at its top and bottom, said bottom support being substantially cylindrical and hollow for accommodating the screen when in a rolled condition, means for adjusting said screen in a vertical position, a training device comprising a frame member, generally rectangular in shape adapted to be fastened to the bottom screen support and detachably and movably positioned at any selected location along the length of the bottom screen support, said training device having outwardly extending arms at each end thereof, connected by a swinging rod member pivotal about one arm against a torsional spring actuated by the upward movement of the hand of the bowler as same comes in contact with the swinging rod member, the size of the opening between the outwardly extending arms adapted to be adjustable.

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