

No. 834,714.

PATENTED OCT. 30, 1906.

E. FAHL.  
GAME APPARATUS.  
APPLICATION FILED SEPT. 26, 1905.

2 SHEETS—SHEET 1.

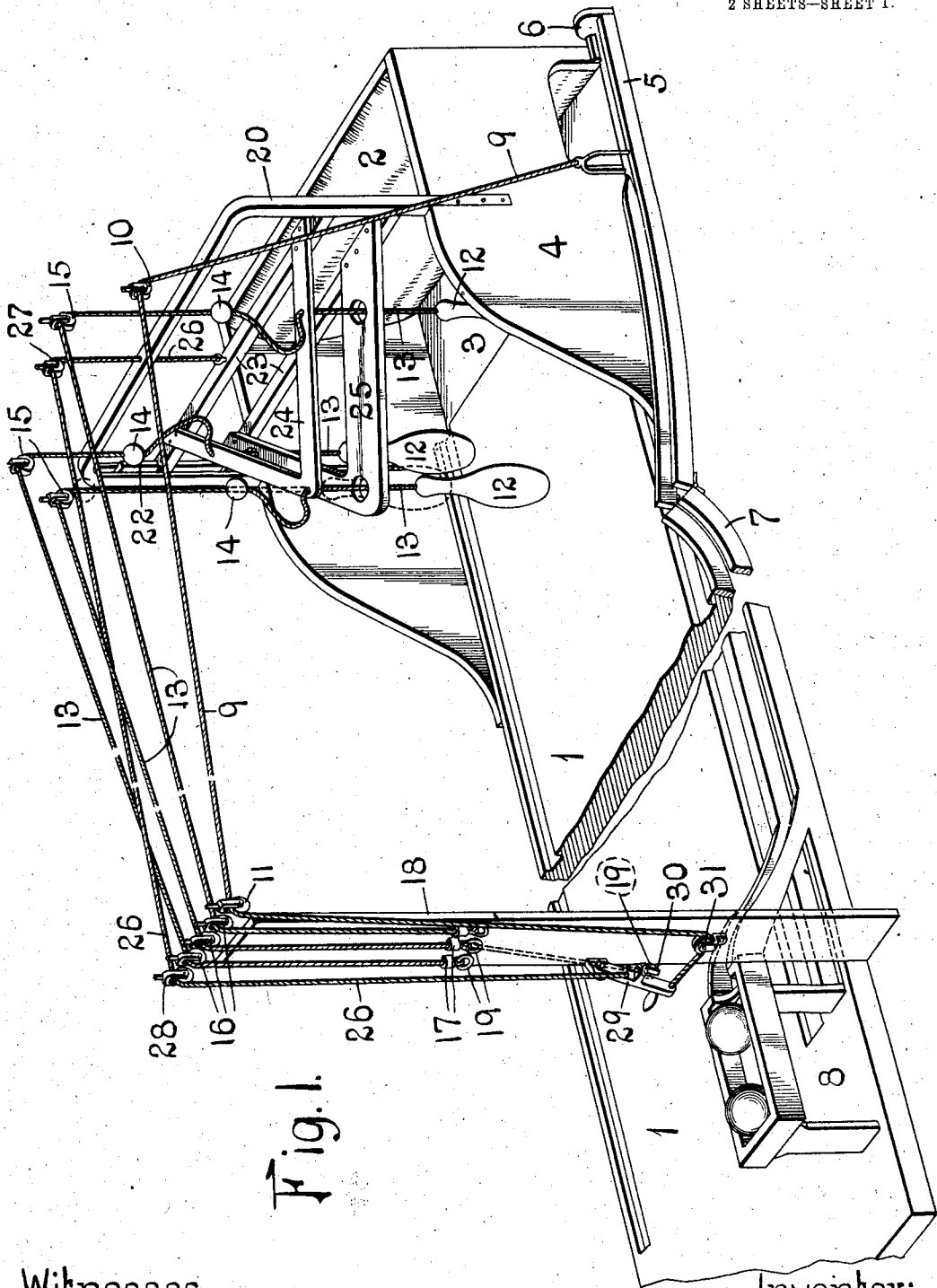


Fig. 1.

Witnesses  
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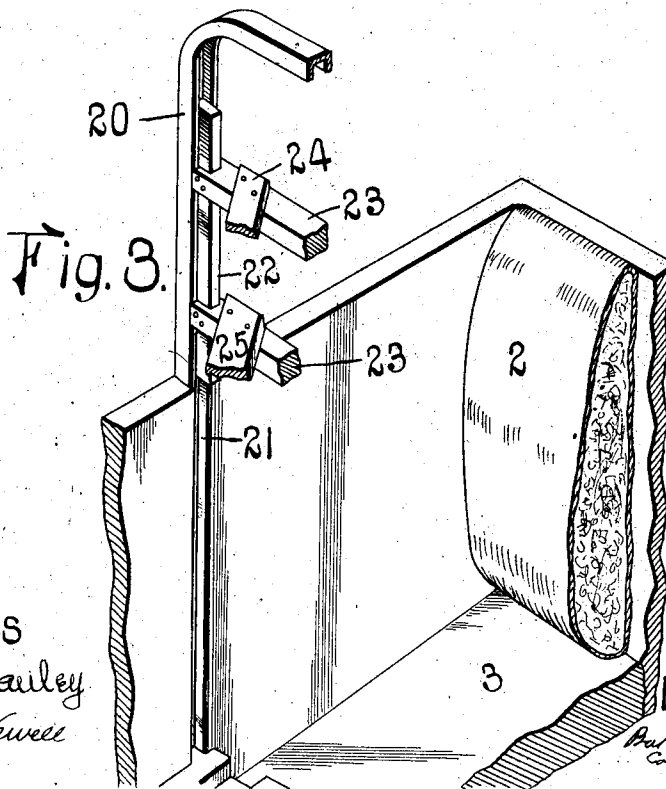
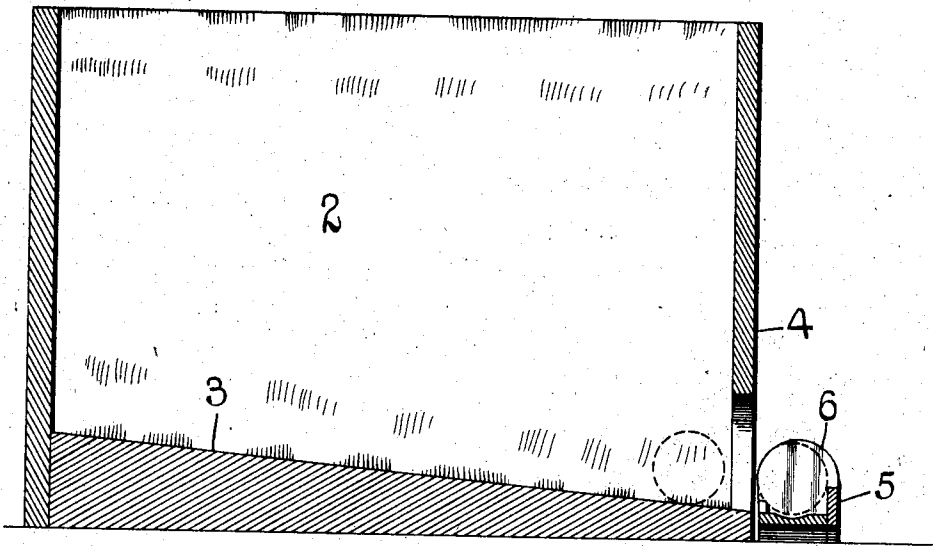
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GAME APPARATUS.  
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2 SHEETS—SHEET 2.

Fig. 2



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# UNITED STATES PATENT OFFICE.

EUGENE FAHL, OF ST. LOUIS, MISSOURI.

## GAME APPARATUS.

No. 834,714.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed September 25, 1905. Serial No. 280,041.

*To all whom it may concern:*

Be it known that I, EUGENE FAHL, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Game Apparatus, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a detail view of my improved game apparatus. Fig. 2 is a vertical sectional view through the ball-trough at the rear end of the alley, and Fig. 3 is a detail view of one of the standards at the rear end of the alley.

This invention relates to a new and useful improvement in game apparatus of the class commonly known as "cocked hat," in which three pins are set up on an alley and the player rolls the ball along the alley with the object of knocking down the pins.

Heretofore it has been the general practice to have a boy at the rear end of the alley, who after a player had rolled his allotted number of balls, usually three, would reset the pins and place the balls in the return-trough leading to the front end of the alley.

It is the object of my present invention to provide means for resetting the pins which may be knocked down or displaced by a player and contemporaneously with the operation of such resetting mechanism to also return the balls to the forward end of the alley. It is obvious, however, that the resetting mechanism may be operated independently of the ball-restoring mechanism.

With these objects in view the invention consists in the construction, arrangement, and combination of the several parts, all as will be hereinafter described, and pointed out in the claims.

In the drawings, 1 indicates the alley, which may be of usual form, at the back of which is an end wall provided with a buffer or cushion 2. In front of this buffer and beyond the horizontal portion of the alley 1 is a laterally-inclined floor portion 3, constituting the ball-trough for discharging the balls through an opening in one of the side walls 4 into a trough-section 5. This trough-section is provided with a rear end wall 6 and is inclined upwardly at its forward end and hinged to a stationary trough-section 7, secured to the side of the alley 1 and whose rear end is preferably upwardly inclined, as

shown in Fig. 1. The forward end of the stationary section 7 is upwardly inclined, so as to deliver the balls into a home trough 8, elevated above the level of the horizontal portion 1 of the alley, so as to place the balls within convenient reach of the player. The free end of the hinged trough-section 5 has a cable 9 connected thereto passing over a pulley 10 and extending forwardly to the front end of the alley, where it passes over another pulley 11, and thence downwardly to within convenient reach of the player. After the balls have been rolled by a player and collected into the trough-section 5 the player pulls down on the forward end of cable 9 and elevates the trough-section 5 so as to start the balls forwardly, impetus being gathered when the balls roll down the inclined portion at the rear end of the fixed portion of the trough, such impetus being arrested by the inclined portion at the forward end of the trough leading up to the home trough 8, so that when the balls are delivered into the home trough they have been deprived of their momentum sufficiently to roll slowly into the home trough.

From the above it will be seen that the mechanism for returning the balls could be operated independently of the mechanism for resetting the pins; but in the construction shown in the drawings I have shown the two mechanisms as being connected, so that the act of restoring the balls also resets the pins, and vice versa.

12 indicates pins which are designed to be set in position at the corners of an imaginary triangle at the rear end of the horizontal portion 1 of the alley. Each of these pins is provided with a flexible cable 13, and each cable is preferably provided with a weight 14 for the purpose of taking up slack on one side of said weight and placing said slack on the other side or below said weight. Cables 13 pass over pulleys 15, carried by some suitable support or arranged in the ceiling of the alley-way, said cables passing forwardly and over pulleys 16 and downwardly, preferably through guides 17, arranged on an upright board 18, the back of which may be used for tally purposes. Each of the cables 13 is provided with a ring 19 at its forward end, which ring coacts with the guide 17 and limits the movement of the cable under the influence of the slack take-up weights 14.

20 indicates a channel-iron in the form of an inverted-U-shaped frame secured to the

side walls 4, the vertical legs of which form continuations of vertical grooves 21 in the inner faces of the side walls 4. In these grooves operates a frame consisting of vertical guide members 22, connected by upper and lower cross-pieces 23, which cross-pieces 23 carry, respectively, a stop-board 24 and a positioning-board 25. The positioning-board 25 is provided with openings sufficiently large to receive the upper ends of the pins 12. Through these openings and through alining but smaller openings in the stop-board 24 pass the cables 13. On account of the smaller openings in the stop-board, such openings being of such size as to permit only the free passage of the cables 13, the slack in the cables below the weights 14 will usually be located above the stop-board.

26 indicates a cable connected to the cross-piece 23 and passing upwardly through an opening in the connecting cross-piece of the channel-iron, and thence over a pulley 27, forwardly and over the pulley 28, and downwardly to a lever 29, pivotally connected to the upright 18. The pivotal point of this lever is located some distance from the upright 18, so that when the lever is turned down the point of connection of cable 26 therewith and the side of the pulley 28 over which said cable passes are past the position of dead-center with respect to the pivotal point of the lever 29, and thus the lever when depressed will be held in such position without the employment of any special fastening device for such purpose. However, if desired, a fastening device could be employed. Lever 29 carries a lug on which is a pin 30.

The operation of the device is as follows: Assuming that the pins are set and the reset frame is elevated, as shown in Fig. 1, and the player rolls a ball, the ball may strike one pin and knock it down or may knock all of the pins down. If one pin is struck and it is desired to remove the "dead wood" from the alley, the player selects the proper cable and pulls it down until the ring 19 is slipped over the pin 30. This will elevate the pin, as shown by dotted lines in Fig. 1, so that the upper end of the pin is in the positioning-board, the upward movement of the pin being stopped by the stop-board. If another pin is knocked down, it may also be elevated. If three pins are knocked down, they are elevated by pulling down their proper cables and placing the rings on the forward ends of said cables over the pin 30. After the pins are raised, as described, the lever 29 is lifted and in being lifted permits the frame and the pins positioned in the frame to descend until the pins rest on the alley, at which time the rings 19 will slip off of the pin 30, releasing the pins and enabling the lever 29 to be again depressed, so as to raise the resetting-frame from the pins. The parts are so proportioned that when the lever 29 is raised and the

frame and pins lowered the pins will rest firmly on the floor without danger of being canted or tilted before the rings slip from the pin 30. Weights 14 will of course cause the rings to slip from the pin, and then when the lever 29 is depressed the slack below the weights will be taken up above the stop-board.

Of course if only one pin has been knocked down it is only necessary to raise that pin into the frame for the purpose of positioning it, when the lever can be manipulated and that pin properly positioned with respect to the others.

I have heretofore referred to the fact that while the ball-restoring mechanism could be operated independently from the pin-resetting mechanisms the two mechanisms were intended to be operated simultaneously. This is effected by passing the cable 9 after it extends down from the pulley 11 under a pulley 31 and connecting the end of said cable to lever 29. It will be observed that by this arrangement lever 29 when it is lifted also lifts the hinged trough-section 5, and when said lever is depressed the trough-section is returned to its normal position. The section is thus made to partly counterbalance the weight of the resetting-frame, and consequently less power is required to operate the lever 29.

I am aware that changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein described without departing from the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a game apparatus, the combination of pins, manually-operated means for selecting and positioning individual pins, and a movable device cooperating with all of the pins and adapted to be operated by the player for resetting the pins after they have been positioned; substantially as described.
2. In a game apparatus, the combination of a plurality of pins, a movable perforated frame for positioning the pins, and manually-operated means for raising individual pins into said frame; substantially as described.
3. In a game apparatus, the combination of pins, a positioning frame arranged above the pins, manually-operated means for raising the pins into position in said frame, and means for lowering the frame and pins; substantially as described.
4. In a game apparatus, the combination of pins, a positioning-frame, individual means for positioning the pins in said frame, and means for lowering the frame and pins onto the alley, the pin-positioning means being connected to said last-named means by a slip connection which is automatically disen-

gaged from said means when the pins touch the alley whereby the pins are released and the frame is permitted to be elevated away from the pins; substantially as described.

5 5. In a game apparatus, the combination of pins, a vertically-slidable frame provided with openings for receiving the different pins, and manually-operated cables connected with said pins and passing through said open-  
10 ings, to draw the pins into the openings; substantially as described.

6. In a game apparatus, the combination of pins, a vertically-slidable frame provided with openings, cables passing through said  
15 openings and connected to said pins, a manually-operated lever, a connection between said lever and the frame, a device on said lever to which the pin-cables may be connect-  
20 ed so that when said lever is actuated the frame and pins will move in unison; substantially as described.

7. In a game apparatus, the combination of pins, a vertically-slidable frame for position-  
25 ing said pins, cables connected to said frame, and a slip connection for the pin-cables with said lever whereby when the frame and pins are lowered the pin-cables are auto-  
30 matically released, permitting the frame to be raised, leaving the pins in their set positions; substantially as described.

8. In a game apparatus, the combination of a vertically-slidable frame having pin-positioning openings, manually-operated cables  
35 passing through said openings, pins connected to said cables, guiding devices for said cables located directly above the pins, and weights on said cables between said guiding  
40 devices and said frame for taking up the slack; substantially as described.

9. In a game apparatus, the combination

of a movable frame, pins having manually-operated cables connected thereto, for raising the pins into position in said frame, and means for moving the frame and pins so as to  
45 set the pins in proper position on the alley, said means being adapted to be operated in the reverse direction for restoring the frame to its normal position; substantially as described.

10. In a game apparatus, the combination of a movable pin-resetting frame, a manually-operated lever for actuating said frame, a plurality of individually-operated cables  
55 adapted to be connected to said lever, and a ball-restoring mechanism adapted to be connected to said lever, so that whenever said lever is actuated the ball-restoring mechanism will be operated and said pin-resetting  
60 mechanism simultaneously; substantially as described.

11. In a game apparatus, the combination of pin-resetting mechanism, a lever for operating the same, a ball-restoring mechanism connected to and operated by said lever,  
65 means for individually selecting and positioning the different pins to be reset and connecting said pins to said operating-lever, whereby when said lever is operated to reset  
70 the positioned pins on the alley the pins are automatically released when set, the movement of said lever also operating the ball-restoring device to return the balls to the front  
end of the alley; substantially as described.

In testimony whereof I hereunto affix my  
75 signature, in the presence of two witnesses, this 20th day of September, 1905.

EUGENE FAHL.

Witnesses:

F. R. CORNWALL,  
GEORGE BAKEWELL.