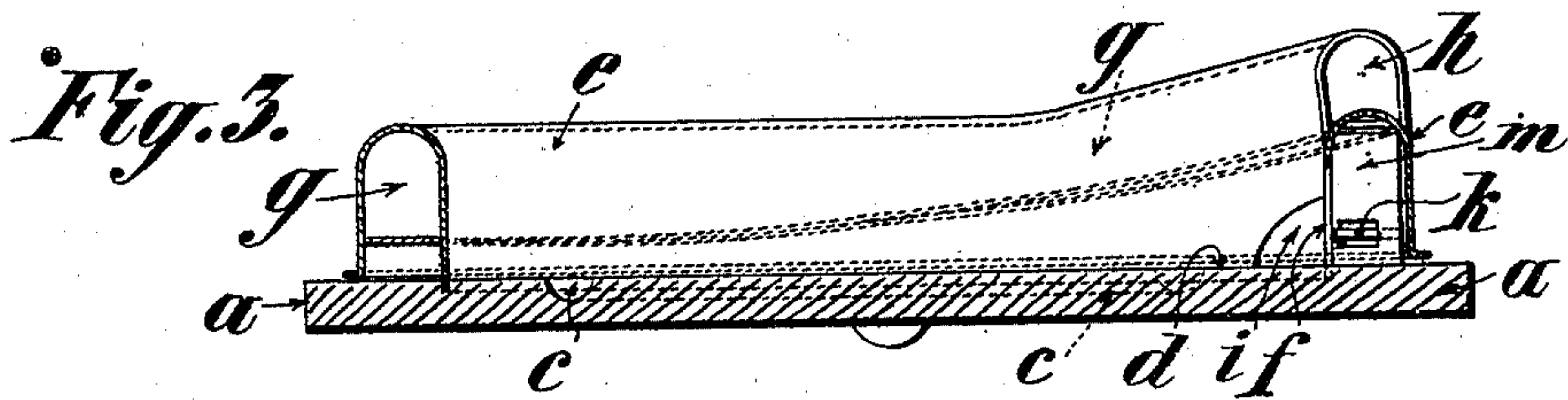
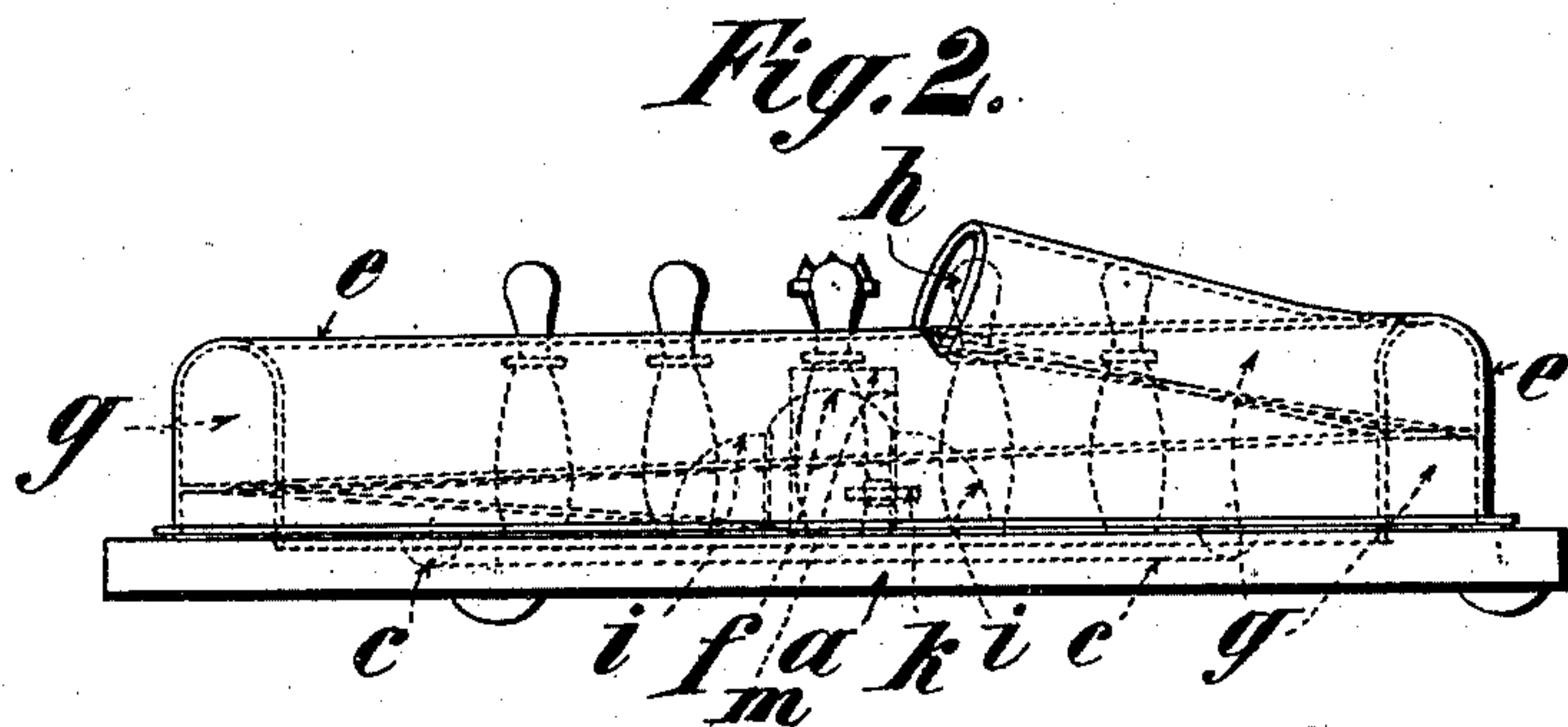
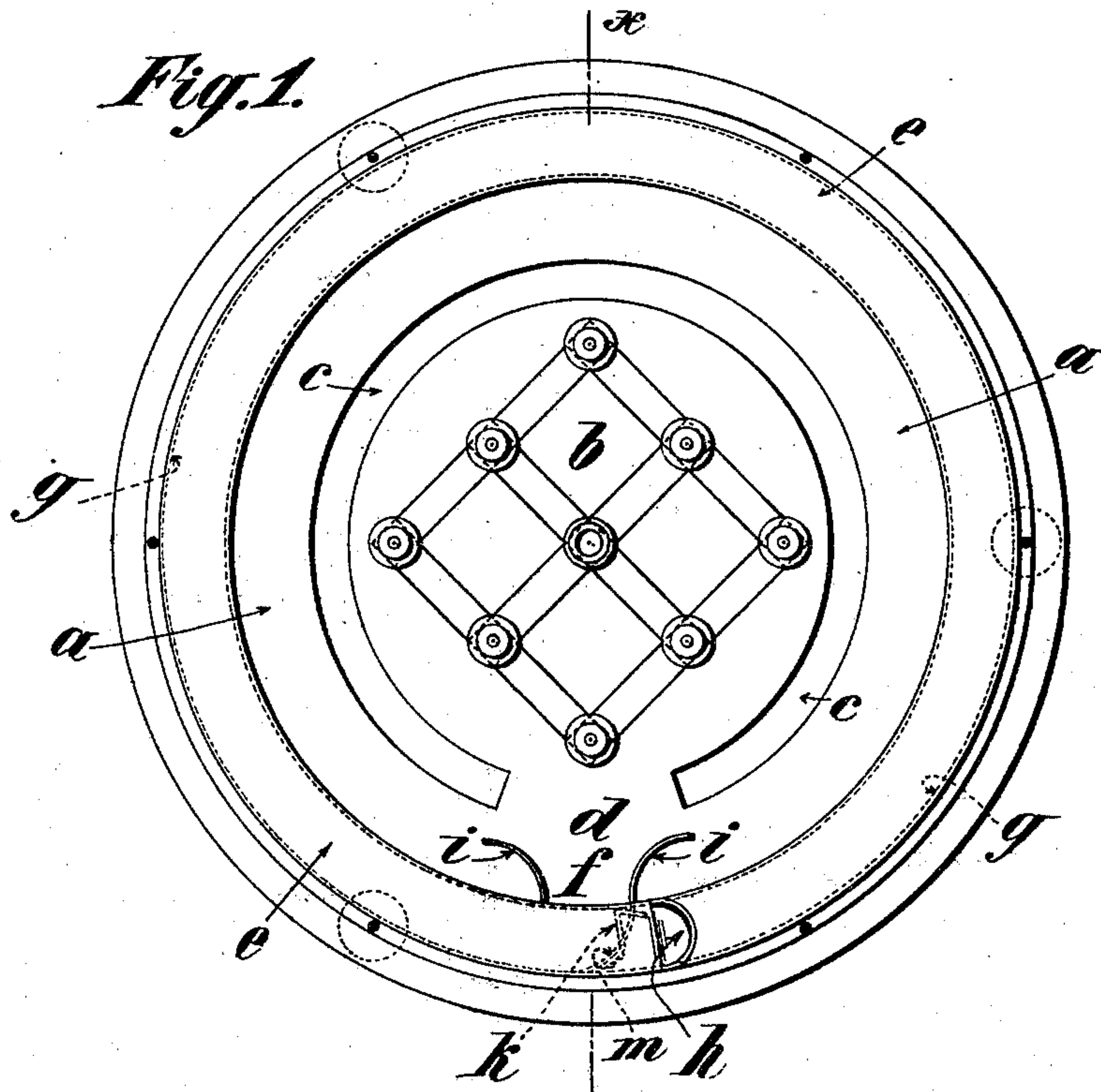


No. 671,172.

Patented Apr. 2, 1901.

W. SENZER.
TUNNEL NINEPIN GAME.
(Application filed Sept. 7, 1900.)

(No Model.)



Witnesses
Louise Weber
Les Rothschild.

Inventor
W. Senzer
by Dr. L. M. Böhm,
his Attorney.

UNITED STATES PATENT OFFICE.

WOLF SENZER, OF VIENNA, AUSTRIA-HUNGARY, ASSIGNOR OF ONE-HALF
TO JULIUS STEIN, OF SAME PLACE.

TUNNEL NINEPIN GAME.

SPECIFICATION forming part of Letters Patent No. 671,172, dated April 2, 1901.

Application filed September 7, 1900. Serial No. 29,314. (No model.)

To all whom it may concern:

Be it known that I, WOLF SENZER, mechanic, a citizen of Austria, residing at Vienna, Province of Lower Austria, Austria-Hungary, have invented certain new and useful Improvements in Tunnel Ninepin Games; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a tunnel ninepin game, and may be as well applied to a tenpin game.

15 An essential feature of this invention is that the pin-board is provided with a tunnel having a screw-shaped bottom which surrounds the position of the pins completely. The ball which is to throw down the pins is led toward the same through this tunnel, whose outer walls are arc-shaped near the mouth for the purpose of deviating the ball to the one side or the other. There is further provided a plate-spring which, in combination with other parts, forms a feature of my invention.

Another feature of this invention is that the pin-board is surrounded by a groove in the ground-plate for the purpose of stopping the ball when it has passed the position of the pins, preventing in this manner the rebounding of the ball.

35 The invention is represented in the accompanying drawings in Figure 1 in plan view, and in Fig. 2 in front view. Fig. 3 is a section through Fig. 1 on line *x x*.

The pin-board *b*, marked for the position of the pins, is provided on the ground-plate *a* and surrounded by a wall *e*, forming a closed tunnel *g*, with screw-shaped bottom. The opening *h*, into which the balls are to be thrown, is arranged on the highest point of the tunnel, while the mouth *f*, through which the ball rolls out, is situated in the plane of the ground-plate.

45 Near the mouth *f* the outer wall of the tunnel is curved and the latter closed with this curved portion, forming in this manner a guide-plate for the ball, so that the latter is more or less deviated in one direction or the

other toward the pins, proportionably to the inertia with which it arrives at the end of the tunnel. For the purpose of assuring this deviation and to increase the deviating effect of the plate *m* there is provided a spring *k*, 55 against which the ball bounds before coming out of the tunnel, whereby it is deviated by the elasticity of the spring *k*.

The mouth *f* of the tunnel may be provided with guide-plates *i i*, which prevent the ball 60 from rolling sidewise.

Surrounding the pin-board in the ground-plate there is a groove *c*, with an interruption at a point opposite the mouth *f*, so as to allow the balls to roll toward the pins. This groove 65 has the further purpose of stopping the ball when it has passed the pin-board and to prevent the rebounding and facilitate the taking out of the ball.

Having thus described my invention, I 70 claim as new and desire to secure by Letters Patent—

1. A ninepin game composed of a ground-plate *a*, a pin-board *b* provided thereon, a groove *c* adjoining the pin-board and interrupted in the front, a wall *e* surrounding the ground-plate and forming a tunnel *g* having a screw-shaped bottom and curved in the front whereby the tunnel is closed, an opening *h* through which the ball enters and arranged on the highest point of the tunnel *g* and the mouth *f* through which the ball rolls out, and situated in the plane of the ground-plate, as specified. 80

2. A ninepin game composed of a ground-plate *a*, a pin-board *b* provided thereon, a groove *c* adjoining the pin-board and interrupted in the front, a wall *e* surrounding the ground-plate and forming a tunnel *g* having a screw-shaped bottom and curved in the front whereby the tunnel is closed, an opening *h* through which the ball enters and arranged on the highest point of the tunnel *g* and the mouth *f* through which the ball rolls out, and situated in the plane of the ground-plate, and guide-plates *i i* provided on the mouth *f*, as specified. 85 90 95

3. A ninepin game composed of a ground-plate *a*, a pin-board *b* provided thereon, a groove *c* adjoining the pin-board and inter- 100

rupted in the front, a wall *e* surrounding the
ground-plate and forming a tunnel *g* having
a screw-shaped bottom and curved in the
front whereby the tunnel is closed, an open-
5 ing *h* through which the ball enters and ar-
ranged on the highest point of the tunnel *g*
and the mouth *f* through which the ball rolls
out and situated in the plane of the ground-
plate, and guide-plates *i i* provided on the

mouth *f*, and the plate *m* provided with the 10
spring *k*, as specified.

In testimony that I claim the foregoing as
my invention I have signed my name in pres-
ence of two subscribing witnesses.

WOLF SENZER.

Witnesses:

WILLHELM ZORGOR,
ALVESTO S. HOGUE.