

G. W. Eickell,

Game Board,

N<sup>o</sup> 9,916.

Patented Aug. 9, 1853.

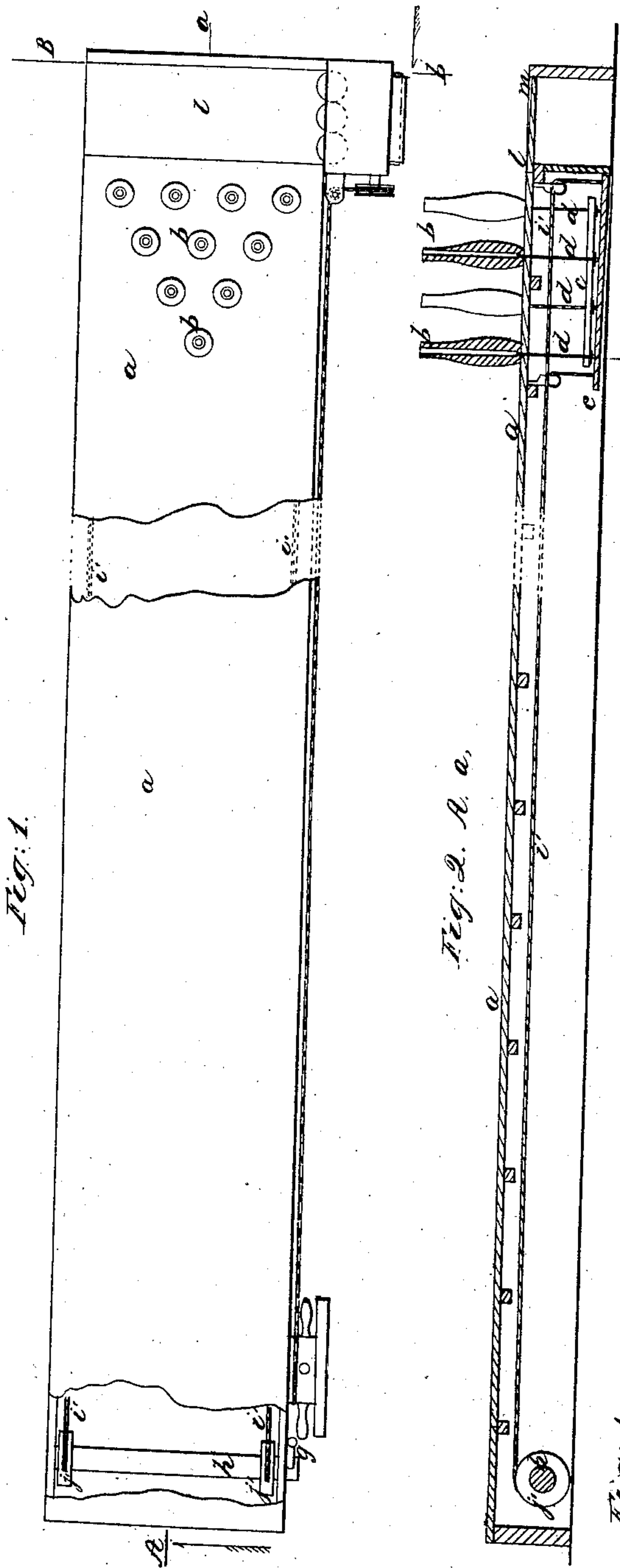


Fig. 2. A. a.

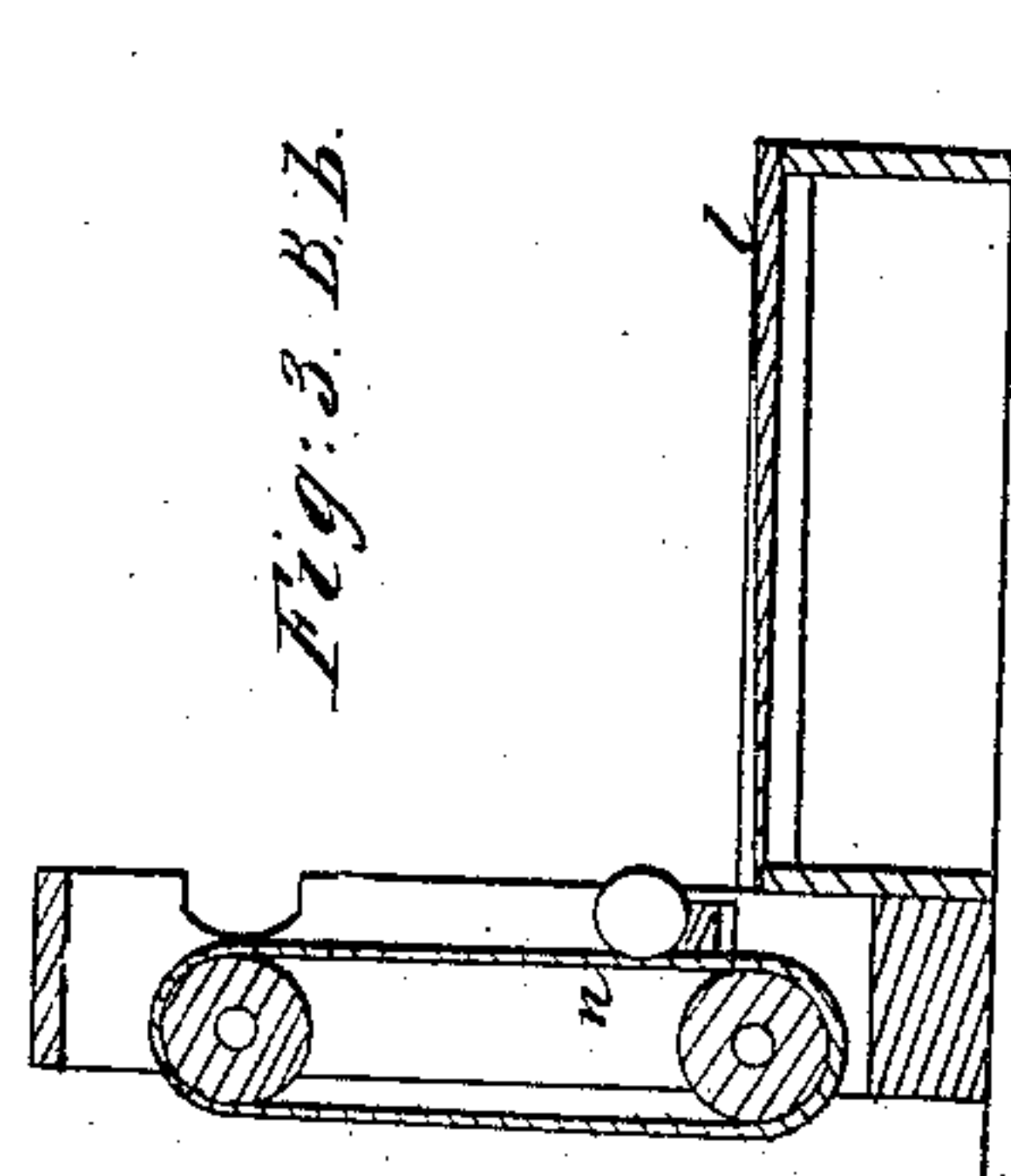
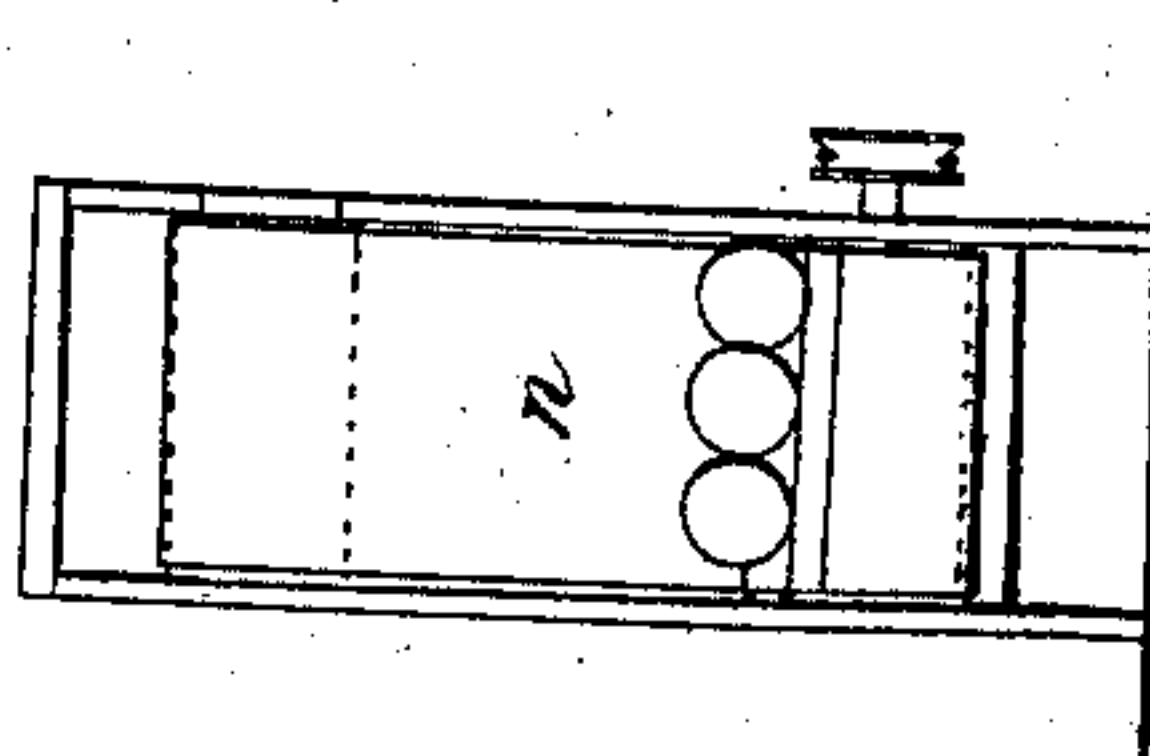


Fig. 4.



# UNITED STATES PATENT OFFICE.

GEO. W. EICHELL, OF NEW YORK, N. Y.

## SETTING UP TEN-PINS AND RETURNING BALLS.

Specification of Letters Patent No. 9,916, dated August 9, 1853.

*To all whom it may concern:*

Be it known that I, GEORGE W. EICHELL, of the city, county, and State of New York, have invented certain new and useful Improvements in Apparatus for Setting Up Ten-Pins and Returning the Balls, and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a plan of the apparatus; Fig. 2 a longitudinal section taken at the line A *a* of Fig. 1. Fig. 3, a cross vertical section taken at the line B *b* of Fig. 1, and Fig. 4 is a side elevation of the elevating apparatus.

Several attempts have been made with the view to the setting of the pins and return of the balls by machinery operated at the other end of the table thereby dispensing with the services of the attendant usually employed for this purpose; but so far as I am informed none of these plans are found to work well in practice as the pins are constantly being broken off at the lower end or found not to have sufficient freedom of motion for the purposes of the game as if set up in the ordinary manner.

The object of my invention is to overcome these difficulties, and principally to give the pins which are in advance room to "fly" and hit those in rear and yet keep them within the control of the machinery. For this purpose,

My invention consists in setting up the pins from the head of the table by means of a weight or weights attached to the butts of the pins by means of cords passing through the table, the said weight or weights being operated by means of a platform directly under them which is operated from the head of the table and lowered to admit of the weights setting up the pins, and then raised to admit of the pins being knocked down.

For the purpose of returning the balls to the head of the table, my invention consists in combining with the farther end of the table and just in rear of the pins, a delivery surface which is jointed on to the end of the table and inclined toward the rear and also to one side for the purpose of collecting the balls, together with an elevator of the ordinary construction operated from the head

of the table by which means the balls are raised to the required elevation for their return through an inclined trough.

In the accompanying drawings *a* represents the table which is of the usual construction. The pins *b* are all connected with the triangular weighted plate *c* under the table by means of cords *d* in any convenient manner which will not interfere with the operation of setting the pins.

For the purpose of setting up the pins a single weighted plate *c* may be used or if it be preferred a separate weight for each pin may be used. When the pins are set up by the weights *c* the board *e* is elevated by the lever *g* at the head of the table which operates by means of the shaft *h*, the cords *i' i'* passing over the pulleys *j' j'* for this purpose. The cords *i' i'* are so arranged that the forward end of the board *e* shall be the most elevated, the object being to slacken up the cords by which those pins which are in advance are held to a greater degree than those in rear or farthest from the bowler with the view to have the forward pins when struck by the ball fly and knock down those in the rear.

At the rear end of the table is placed what I denominate the delivery board *l* which where it joins onto the table is flush therewith; but thence is inclined toward the rear and toward one side forming with the back edge *m* of the table a delivery for the balls, which thence descend into the inclined bucket or trough of the elevator *n* (see Figs. 3 and 4,) which is of the usual construction and is operated from the head of the table by a cord and pulley, or a pawl and ratchet as may be desired. When the balls are elevated sufficiently they are returned to the head of the table by means of an inclined trough not represented in the drawings.

I do not claim the elevator *n* nor any particular elevator; neither do I claim setting up the pins by a weight or weights; nor do I intend to claim the setting up of the pins from the head of the table, but

What I claim as my invention and desire to secure by Letters Patent is—

1. Setting up the pins of an alley by an apparatus operated from the head of the table or elsewhere, by means of a weight or weights attached to them by cords when com-



bined with the elevation board which raises and sustains the weight or weights, to admit of the pins being knocked down as herein described.

- 5 2. I also claim the use at the back end of the table of a delivery board applied and constructed as described, in combination

with an elevator for the elevation and return of the balls, substantially as described.

GEO. W. EICHELL.

Witnesses:

CONSTANT BROUNE,  
D. H. DUSTIN.