

(No Model.)

2 Sheets—Sheet 1.

W. E. GOODENOUGH.

PORTABLE FOLDING PARLOR BOWLING ALLEY.

No. 300,862.*

Patented June 24, 1884.

fig. 1.

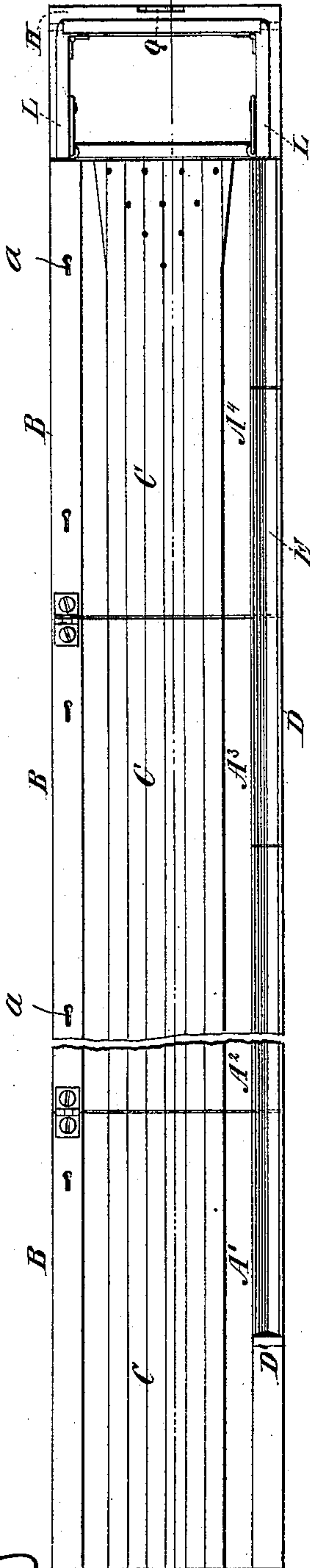


fig. 2.

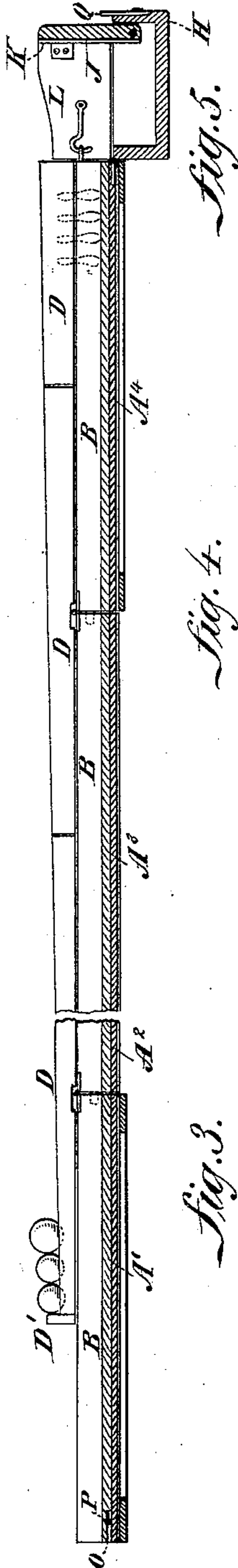


fig. 4.

fig. 3.

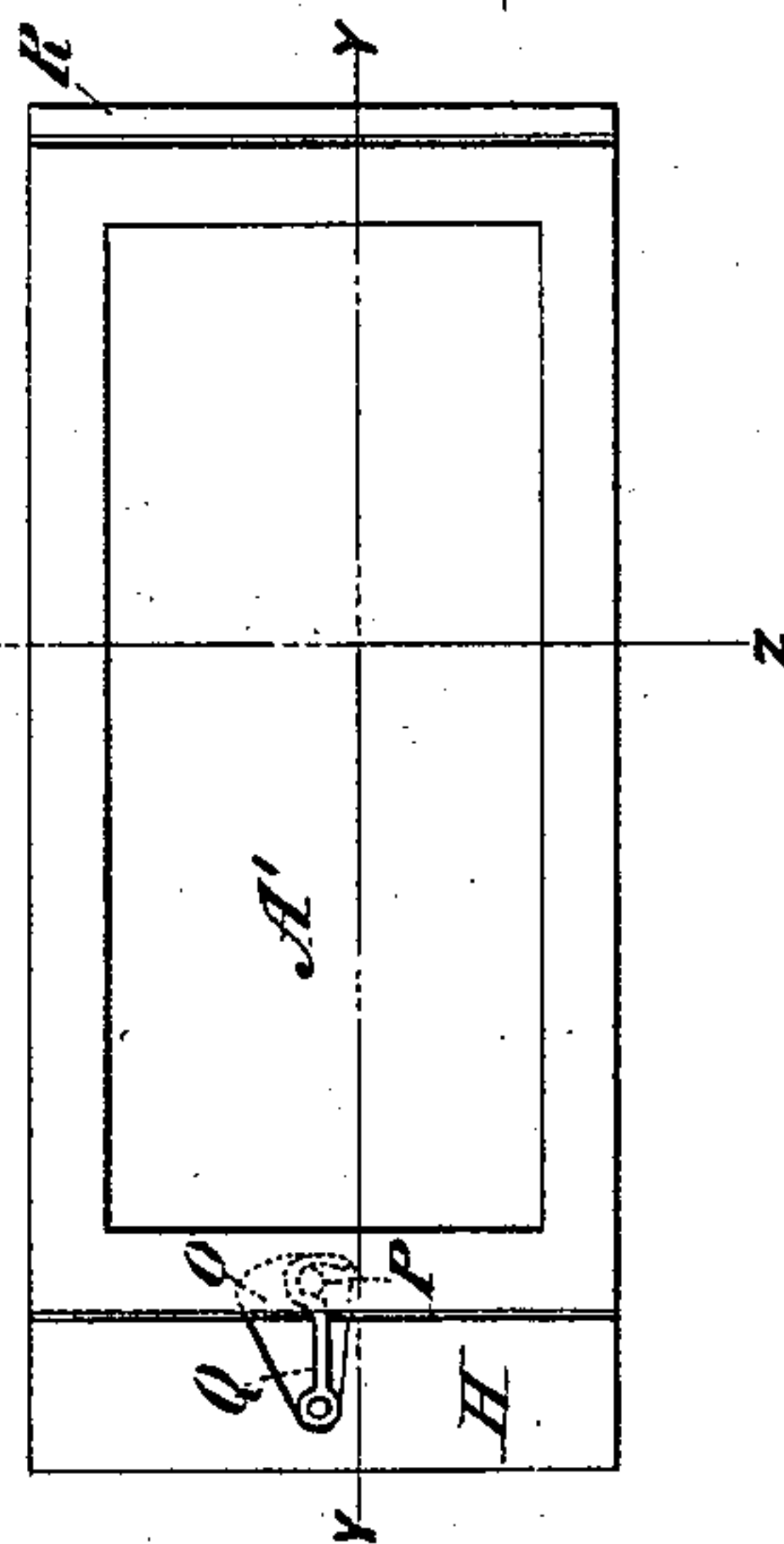
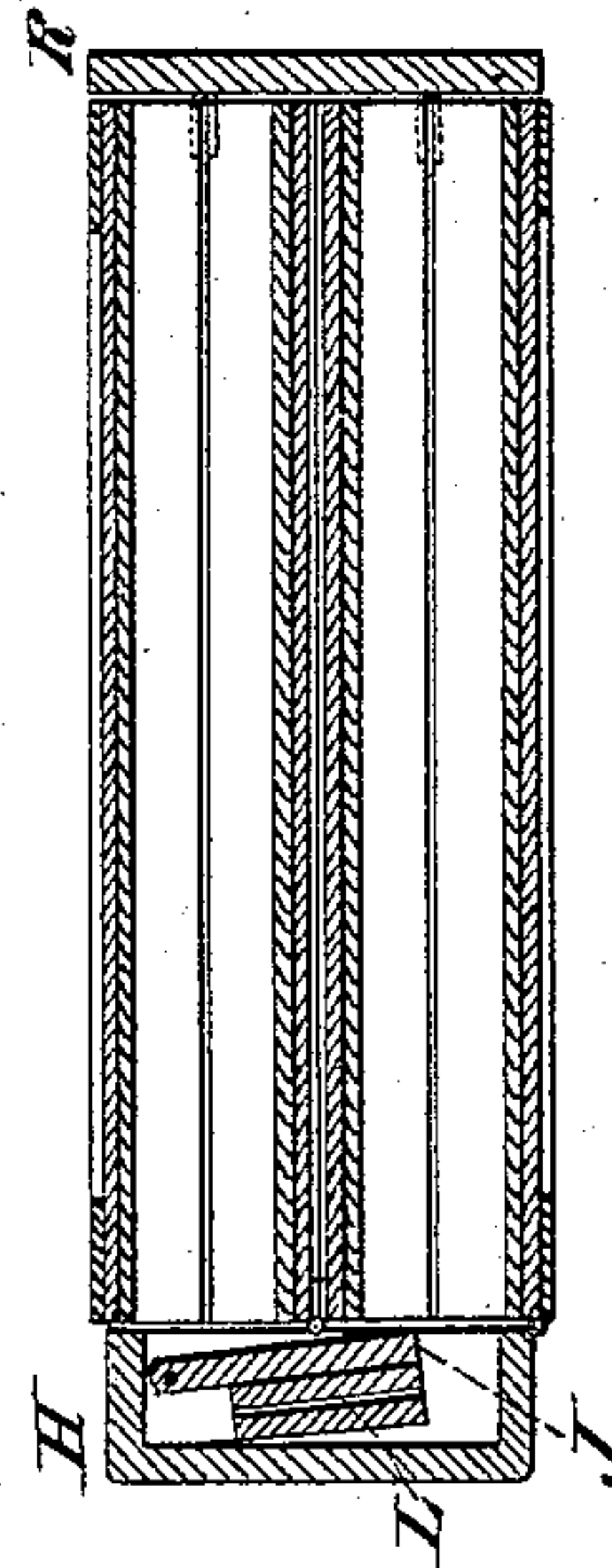


fig. 5.



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Fig. 6.

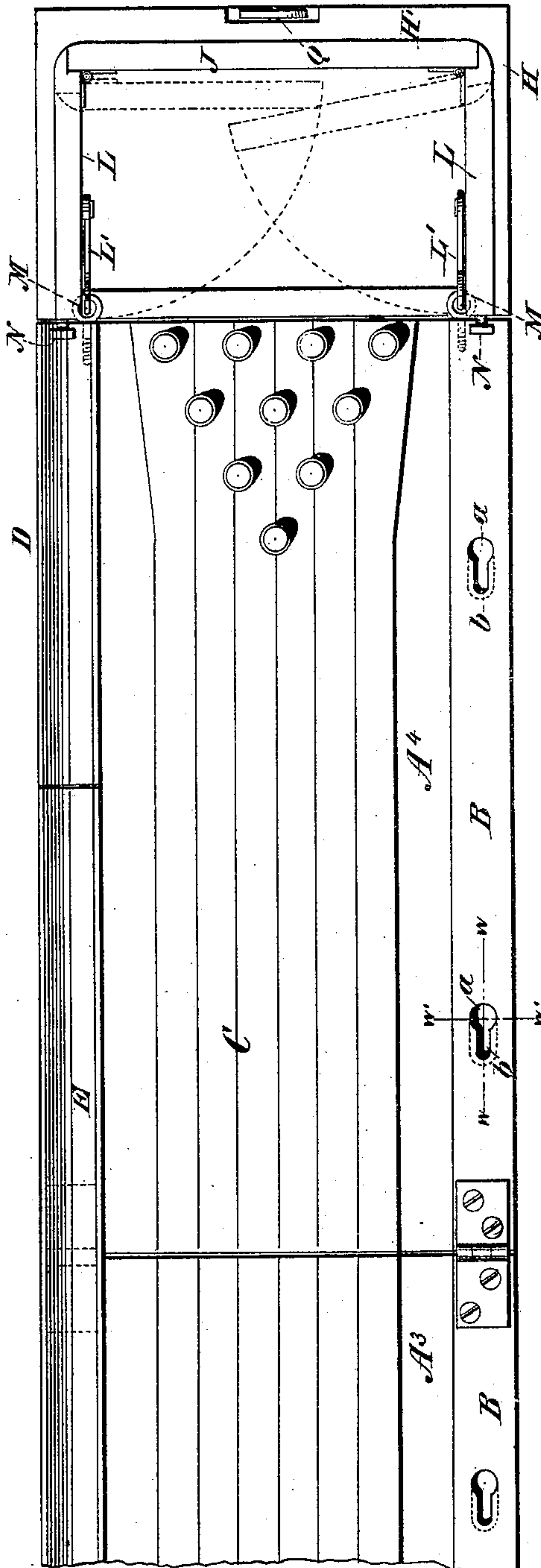


Fig. 8.

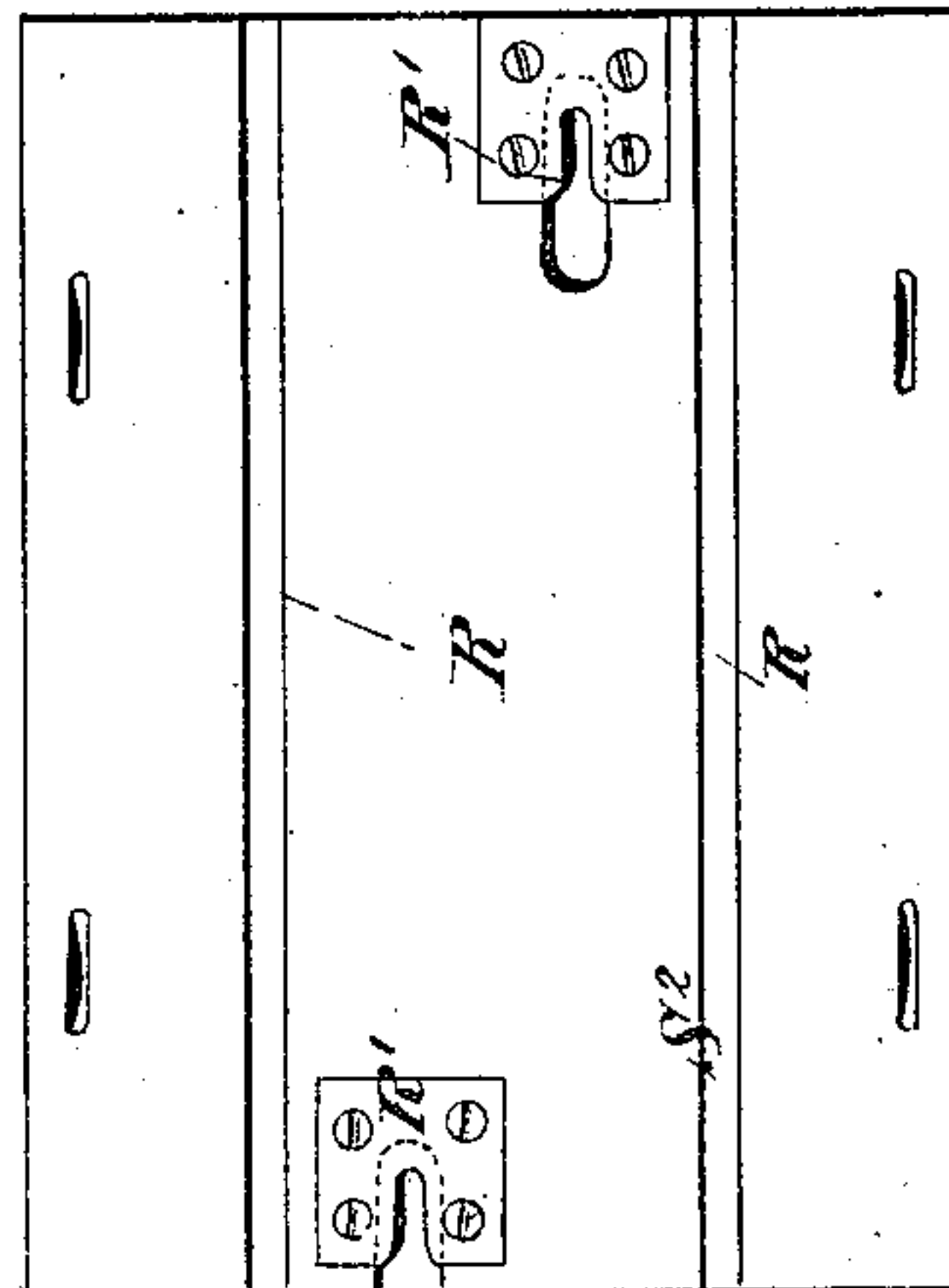


Fig. 9.

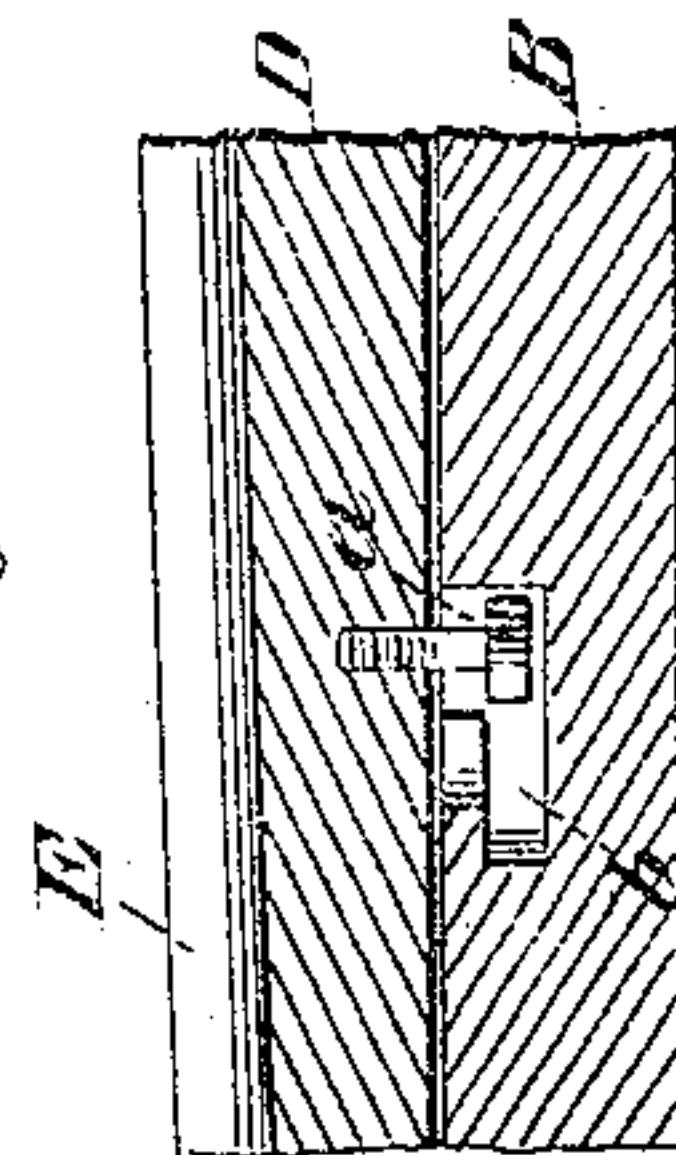


Fig. 10.

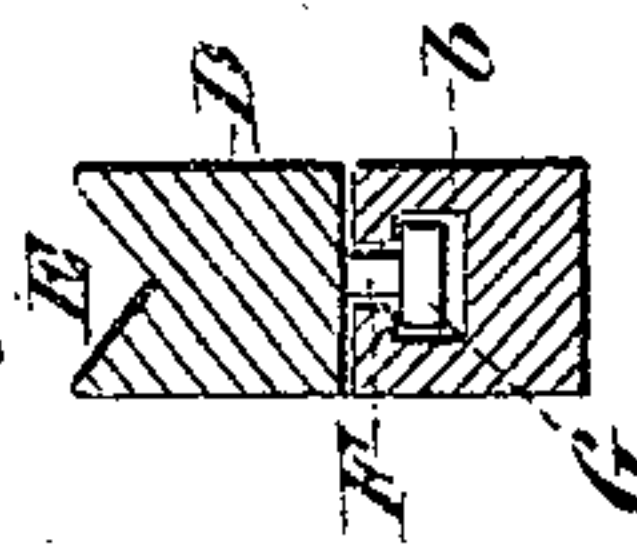
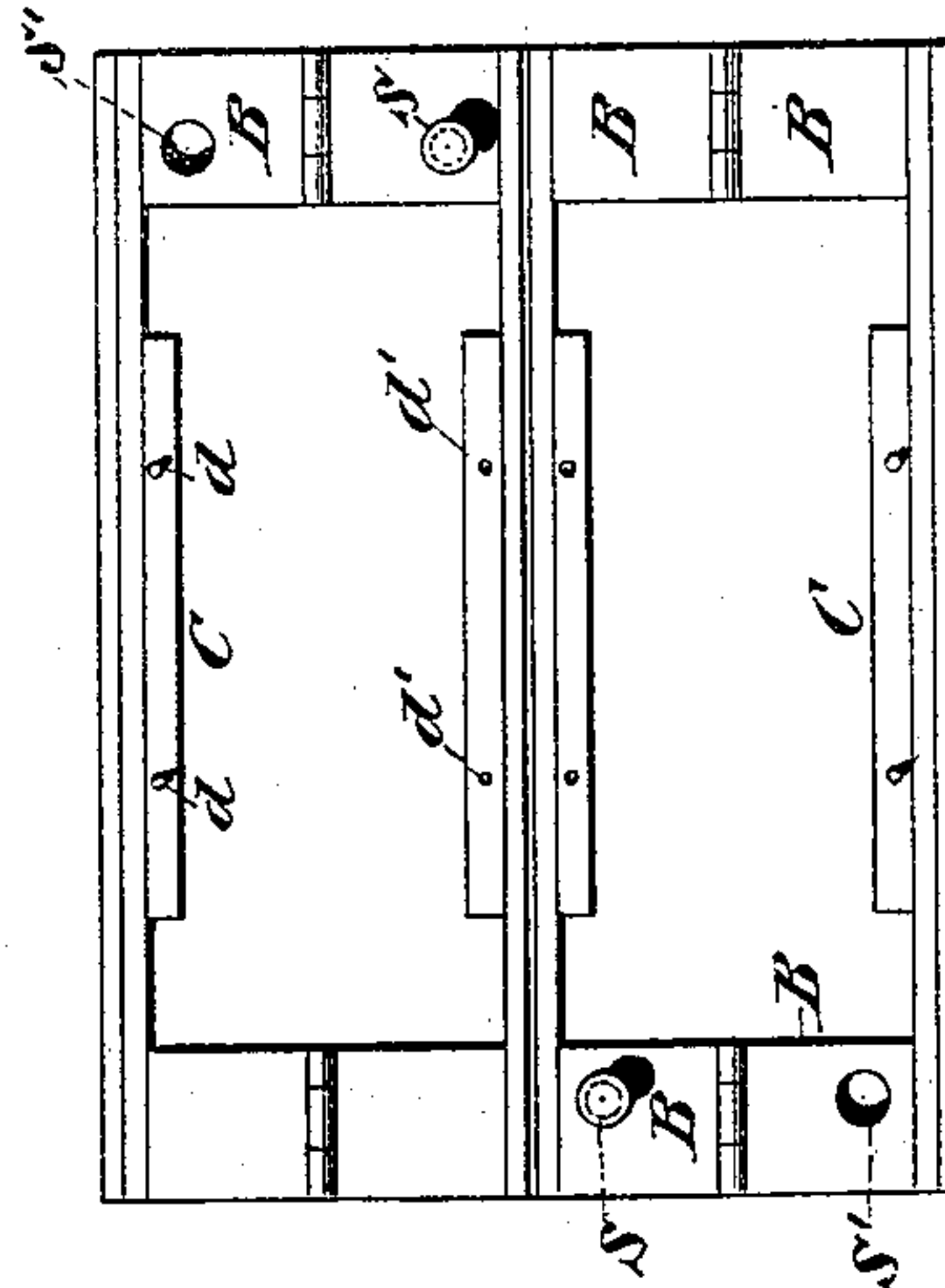


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM E. GOODENOUGH, OF NEWARK, NEW JERSEY.

PORTABLE FOLDING PARLOR BOWLING-ALLEY.

SPECIFICATION forming part of Letters Patent No. 300,862, dated June 24, 1884.

Application filed March 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. GOODENOUGH, of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Portable Folding Parlor Bowling-Alley, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved folding portable bowling or ten-pin alley, which can be erected for use very easily and rapidly, and can be folded very compactly for storage.

The invention consists in a folding bowling-alley formed of a series of sections hinged or otherwise attached to each other.

The invention further consists in a folding box hinged or otherwise attached to one end of the alley, and adapted to receive the balls that have been rolled at the pins.

The invention further consists in the combination, with the above-described alley, of detachable grooved strips or gutters adapted to be secured on the side strips of the sections.

The invention also consists in various parts and details and combinations of the same, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is plan view of my improved folding bowling or ten-pin alley, showing it erected for use, parts being broken out and the gutter being removed from one side. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a plan view of my improved bowling-alley, showing it folded. Fig. 4 is a longitudinal sectional elevation on the line $y y$, Fig. 3, the alley being folded. Fig. 5 is a cross-sectional elevation of the same on the line $z z$, Fig. 3, the alley being folded. Fig. 6 is an enlarged detail plan view of the pin end of the alley. Fig. 7 is an enlarged end view of the alley when folded. Fig. 8 is the covering-plate for fitting on the same. Fig. 9 is a longitudinal sectional elevation on the line $w w$, Fig. 6, of the means for holding the gutters on the sides of the alley. Fig. 10 is a cross-sectional elevation on the line $w' w'$, Fig. 6, of the device shown in Fig. 9.

The alley is formed of four parts, A' , A^2 , A^3 ,

and A^4 , hinged or otherwise attached to each other at their ends in such a manner that the under surfaces of the middle parts, A^2 and A^3 , are folded against each other, and the end parts, A' and A^4 , are folded on the upper surfaces of the parts A^2 and A^3 . The outer or under surfaces of the several parts are covered with fabric or finished in any other suitable manner to give them a neat appearance. The several parts A' , A^2 , A^3 , and A^4 are each provided with side ridges, B , which project from the surfaces of the sections. On the upper surfaces of the several sections the alley proper, C , is formed, which is made of narrow strips in the usual manner, and at the end is provided with dots for placing the pins.

In the upper surfaces of the ridges B a series of holes, a , are formed, from which grooves b extend, which have their sides undercut, so that the grooves will have a greater width at the bottom than at the top. Strips D are provided in their upper surfaces with semicircular or V-shaped grooves E , forming troughs down which the balls are rolled from the front end to the rear end of the alley. From the under surfaces of the strips D pins F project, having heads on their outer ends, which heads are of such size that they can pass into the apertures a in the strips D , but cannot be drawn through the grooves b —that is, the width of the grooves b is less than the width of the heads G . Some of the strips D are provided at their ends with tenons or dowels, which pass into apertures in the adjoining strips.

After the alley has been placed on the floor or on a table in a horizontal position, the strips D are placed on the strips B in such a manner that the heads of the several pins or studs F pass into the apertures a in the strips B , and then the strips D are moved in the direction of their lengths or otherwise, so that the heads G pass into the undercut grooves b , thus holding the strips D on the strips B , and preventing the sections A' , A^2 , A^3 , and A^4 from being folded. The strips D are preferably decreased in height from the rear toward the front end, so that the balls will roll down the trough formed by the same easily, and the strips D on the section A are each provided at the outer end with a plate, D' , to prevent the balls from rolling out of the gutter. The al-

ley must also be provided with a receptacle for receiving the balls that have been thrown or rolled at the pins. To the outer or free end of the section A⁴ a box, H, is hinged or otherwise attached, to the inner surface of the outer end, H', of which a board, J, is hinged or otherwise attached, which is about three times as high as the sides of the box, which is provided on its inner surface with a cushion or covering, K. To the ends of the board J two wings, L, are hinged in such a manner that they can be folded against the inner surface of the board J, and they are provided on their inner surfaces with hooks L', adapted to pass into eyes M or staples on the ends of the strips B of the section A⁴, thereby holding the sides L open when the alley is in use. When the alley is not in use, the sides L are folded against the inner surface of the board J, which is then folded down within the box H. On the free ends of the wings L dowels or headed studs N are arranged, which pass into apertures in the ends of the strips D on the sections A⁴. The section A' is provided at its outer end with a slot, O, in which a pin, P, is held, on which a hook, Q, is adapted to catch, the said hook being pivoted in a recess in the outer surface of the sides of the box H, as shown in Fig. 6.

When the apparatus is not in use, the sections are folded, as shown in Fig. 4. The box H is swung up against one end of the folded sections, and held in place by means of the hook Q, as shown in Fig. 3. But the opposite end of the folded alley must also be closed. For this purpose I have provided a board, R, provided with notched plates R', into which headed studs S are passed, which project from the end surfaces of some of the strips B, the ends of the adjoining strips being provided with apertures S' for receiving the said headed studs when the alley is extended. The board R is provided with grooves S², into which the hinges uniting the strips B can pass when the said board R is passed on the ends of the folded sections.

The alley, when erected and extended for use, is placed on a table or any other suitable support, so as to be in a perfectly horizontal position. The balls are rolled in the usual manner, and, after striking the pins, drop into the box H, and are then rolled from the front of the alley back to the rear part of the same, as in an ordinary bowling-alley.

These alleys can be made in different sizes, as may be desired, and when not in use can be folded so compactly as to occupy very little space. When the alley is folded, the strips D are held between the sections, as shown in Fig. 5.

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

1. A bowling-alley constructed of a series of sections hinged or otherwise attached to each other at the ends, substantially as herein shown and described.

2. A bowling-alley constructed with a series of sections hinged or otherwise attached to each other at the ends, and provided with removable side gutters, substantially as herein shown and described.

3. A bowling-alley provided at one end with a hinged or otherwise attached folding box for receiving the balls that have been thrown at the pins, substantially as herein shown and described.

4. A bowling-alley formed of four sections hinged or otherwise attached to each other in such a manner that the rear sides of the middle sections are folded against each other and the end sections are folded over the middle sections, substantially as herein shown and described.

5. The combination, with a bowling-alley, of a hinged or otherwise attached end box for receiving the balls which have been thrown or rolled at the pins, and of a hinged board, J, provided with wings L in the said box, substantially as herein shown and described.

6. The combination, with a bowling-alley, of the hinged or otherwise attached box H, the hinged or otherwise attached board J, the wings L, hinged to the board J, the hooks L', and the eyes or staples M on the end of the alley, substantially as herein shown and described.

7. The combination, with a folding bowling-alley formed of hinged or otherwise attached sections, of a box, H, hinged or otherwise attached at one end, the hook Q, and the pin P, held in the slot O in front edge of the first section, substantially as herein shown and described.

8. The combination, with a bowling-alley formed of a series of hinged or otherwise attached sections, of a box hinged or otherwise attached to one end, and a detachable plate adapted to cover the opposite ends of the sections when folded, substantially as herein shown and described.

9. In a bowling-alley, the combination, with sections having side strips, B, provided with end pins, S, of the board R, provided with notched plates R', substantially as herein shown and described.

10. In a bowling-alley, the combination, with a series of sections hinged or otherwise attached to each other, of strips secured at the sides of the sections, and provided in their upper surfaces with undercut grooves, and of grooved strips provided on their under sides with pins adapted to be passed into the undercut grooves in the upper surfaces of the strips at the sides of the sections, substantially as herein shown and described.

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