

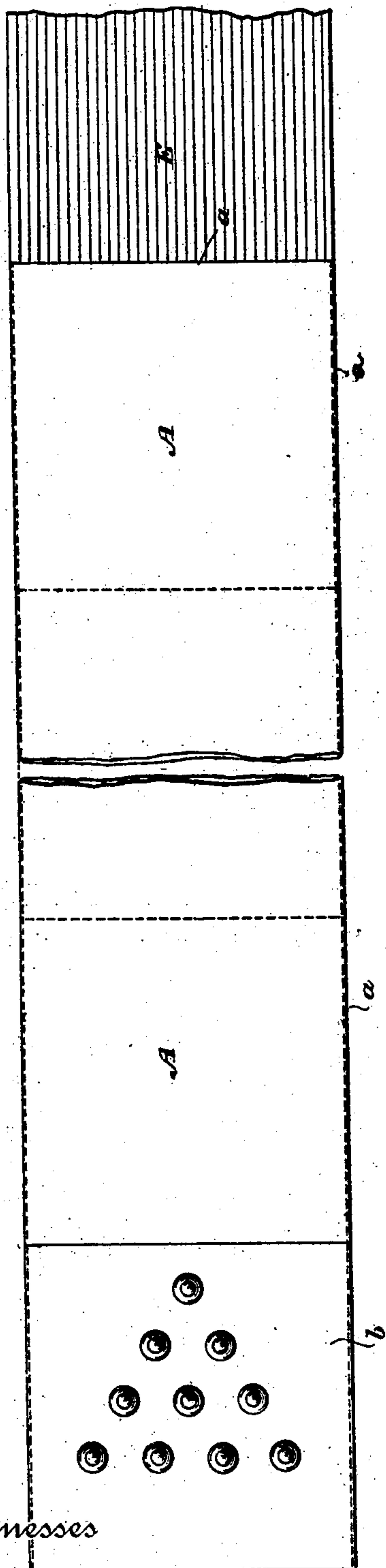
(No Model.)

A. B. CROUNSE.
BOWLING ALLEY.

No. 513,988.

Patented Feb. 6, 1894.

Fig. 1.



Witnesses

Geo. W. Breck.
C. E. Ashley

Fig. 2.

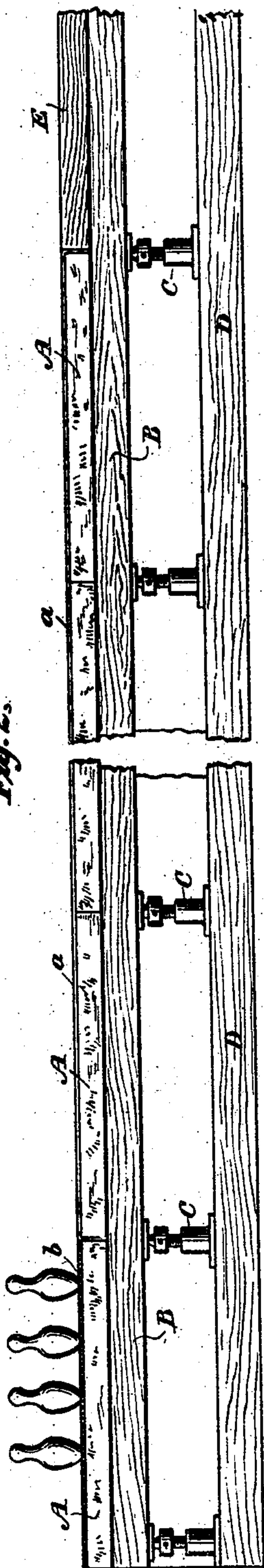
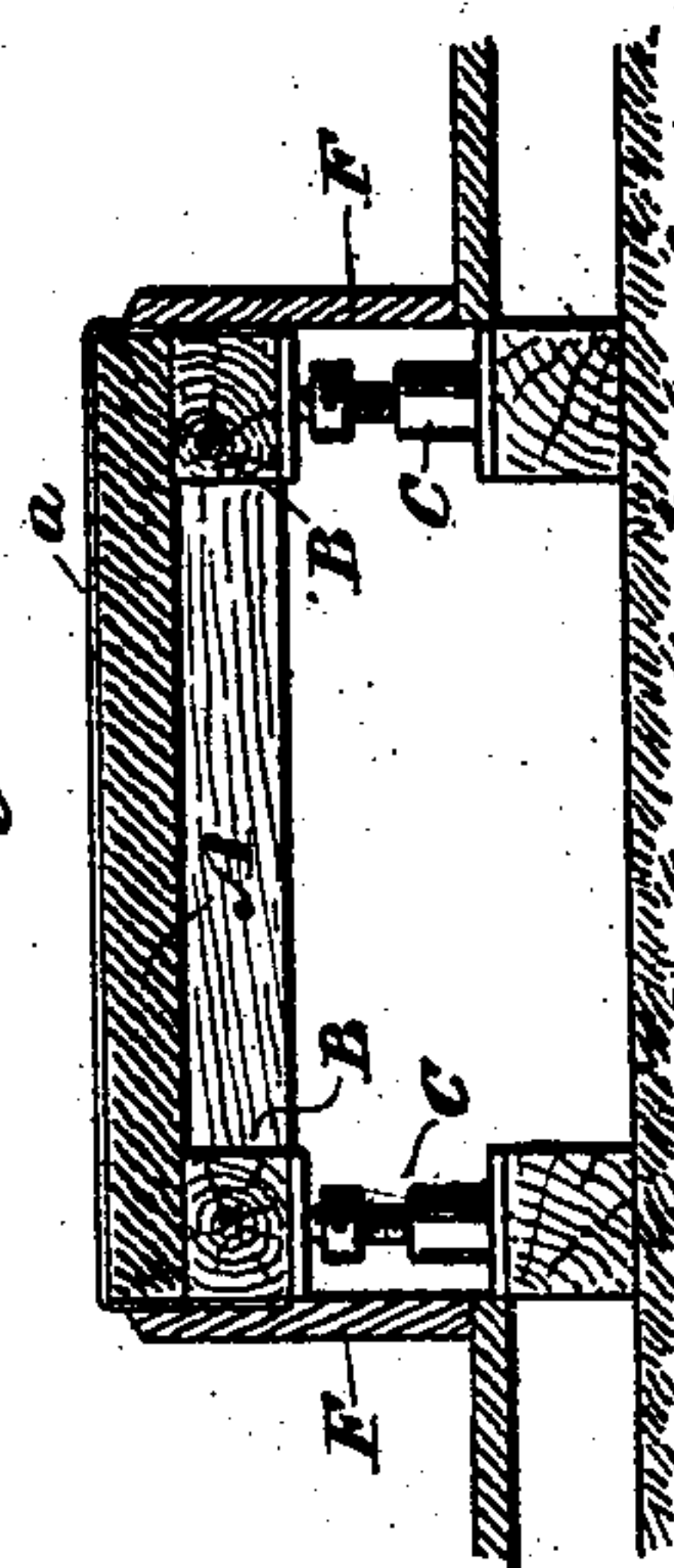


Fig. 3



Inventor

Albert B. Cronin

UNITED STATES PATENT OFFICE.

ALBERT B. CROUNSE, OF PASSAIC, NEW JERSEY, ASSIGNOR OF ONE-HALF
TO CHARLES J. KINTNER, OF NEW YORK, N. Y.

BOWLING-ALLEY.

SPECIFICATION forming part of Letters Patent No. 513,988, dated February 6, 1894.

Application filed January 24, 1891. Serial No. 378,912. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. CROUNSE, a citizen of the United States, residing at Passaic, county of Passaic, and State of New Jersey, have made a new and useful Invention in Bowling-Alleys, of which the following is a specification.

My invention has for its objects: first, the adaptation of means, whereby such alleys may be readily adjusted to a level throughout their length; second, the construction of a bowling alley, which may be readily and quickly torn up and moved to a different location if desired, where it can be speedily rebuilt. I accomplish these several objects by my improved bowling alley hereinafter described, but particularly pointed out in the claims which follow this specification.

My invention will be fully understood by referring to the accompanying drawings, in which—

Figure 1 is a plan view of my improved form of bowling alley, showing the same broken at the center, and a set of ten-pins in position. Fig. 2 is a side elevational view of the same, as seen looking at Fig. 1 from the bottom of the drawings. Fig. 3 is a cross sectional view taken through Fig. 1.

Prior to my invention it was customary to construct bowling alleys of thin wooden boards, set upon edge and nailed, or otherwise securely fastened, together, a sufficient number of such boards being thus built up to construct an alley of from three to four feet in width, the same resting upon a firm foundation throughout the entire length. After the boards are thus nailed together they are dressed down with a carpenter's plane, and with the aid of a carpenter's level the entire surface is leveled.

From constant usage the ordinary type of bowling alley wears away at various places, and requires the attention of an experienced carpenter to re-dress the surface and level it as in the first instance.

An ordinary bowling alley, as thus constructed, is a permanent fixture, and can only be removed bodily when it is desired to transfer it to a new location, and then the presence of an expert carpenter is necessitated to re-

dress the surface and to put it in condition for use. My improved bowling alley avoids these objectionable features, as will be readily understood by referring to the accompanying drawings and description hereinafter made in detail.

D represents two ground sleepers resting upon a firm foundation and leveled with reasonable care beneath the entire alley.

B represents a pair of upper sleepers secured together by cross heads at intervals, as shown in Fig. 3. These sleepers are provided on their under sides with iron plates, secured at intervals, adapted to receive the rounded ends of jack screws C C, the nut portions of said jack screws being firmly secured to the lower sleepers D.

A A A are blocks of stone or equivalent material accurately leveled, and having carefully prepared joints, so that they may abut firmly against each other. These blocks are prepared after the same manner as the blocks of stone which constitute the base of a billiard table. They are then laid in place and covered throughout their length with a cloth *a*, or equivalent yielding foundation, said cloth or fabric extending throughout the length of the stone portion.

b represents preferably a rubber cloth tightly stretched over the last block A of the bowling alley, and upon which are located the ten pins, as clearly shown in Fig. 2.

The two cloths *a* and *b* are drawn over the sides of the alley and held in place by any preferred means, two side-boards F F being shown, said boards constituting the inner sides of the alley runways.

I prefer to make the first portion of the alley, E, of wood, in the same manner as bowling alleys of well known construction are now made, this portion being adapted to receive the ball when the bowler starts it on its journey.

After the bowling alley is thus constructed it is properly leveled with a spirit level by turning the jack screws C, a pair of said jack screws being located at each joint, as shown in Fig. 3.

It will thus be understood that it is a very simple matter for anyone to properly adjust

the entire bowling alley to a level through the agency of the jack screws C. It will also be understood that, being made in pieces, as described the alley may be readily taken up
5 and removed to any other location.

The cloth *a* may cover the entire alley, if preferred, so that no joints are disclosed on the upper surface.

I am aware that billiard tables have heretofore been constructed having sectional blocks of stone provided with leveling screws beneath the ends of the blocks, and a covering of cloth tightly stretched over their upper surface, and my claims hereinafter made are not
15 designed to cover such a construction.

Billiard tables are movable articles and may be transported at pleasure from place to place without taking them apart. Bowling alleys, as heretofore constructed, are fixtures, and
20 when it becomes necessary to remove a complete alley from one point to another as constructed in the usual way, no small expense is incurred in the taking up of the alley and replacing it; and it was with a view of overcoming this important difficulty that I conceived the present invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

30 1. A bowling alley made up of removable sections resting upon adjusting devices for

adjusting them to a common level, substantially as described.

2. A bowling alley, consisting of a series of removable sections resting upon adjusting devices and covered with means for deadening
35 the sound of the rolling balls, substantially as described.

3. A bowling alley made of blocks of stone resting upon means for adjusting them to a
40 common level, substantially as described.

4. A bowling alley made in removable sections resting upon sleepers, which in turn are supported by screws located beneath the juncture of the several sections, substantially
45 as described.

5. A bowling alley made of sections of dressed stone supported by a pair of sleepers, which in turn are supported by jack screws resting on fixed sleepers substantially as de-
50 scribed.

6. A bowling alley made of removable sections of dressed stone supported by a pair of sleepers sustained by adjusting screws resting on fixed sleepers, in combination with a
55 fixed or stretched cloth covering for the alley, substantially as described.

ALBERT B. CROUNSE.

Witnesses:

CHARLES J. KINTNER,
A. V. HINEY.