T. J. Sloan

Game Board.

No. 8,027. Patented Apr. 8, 1851

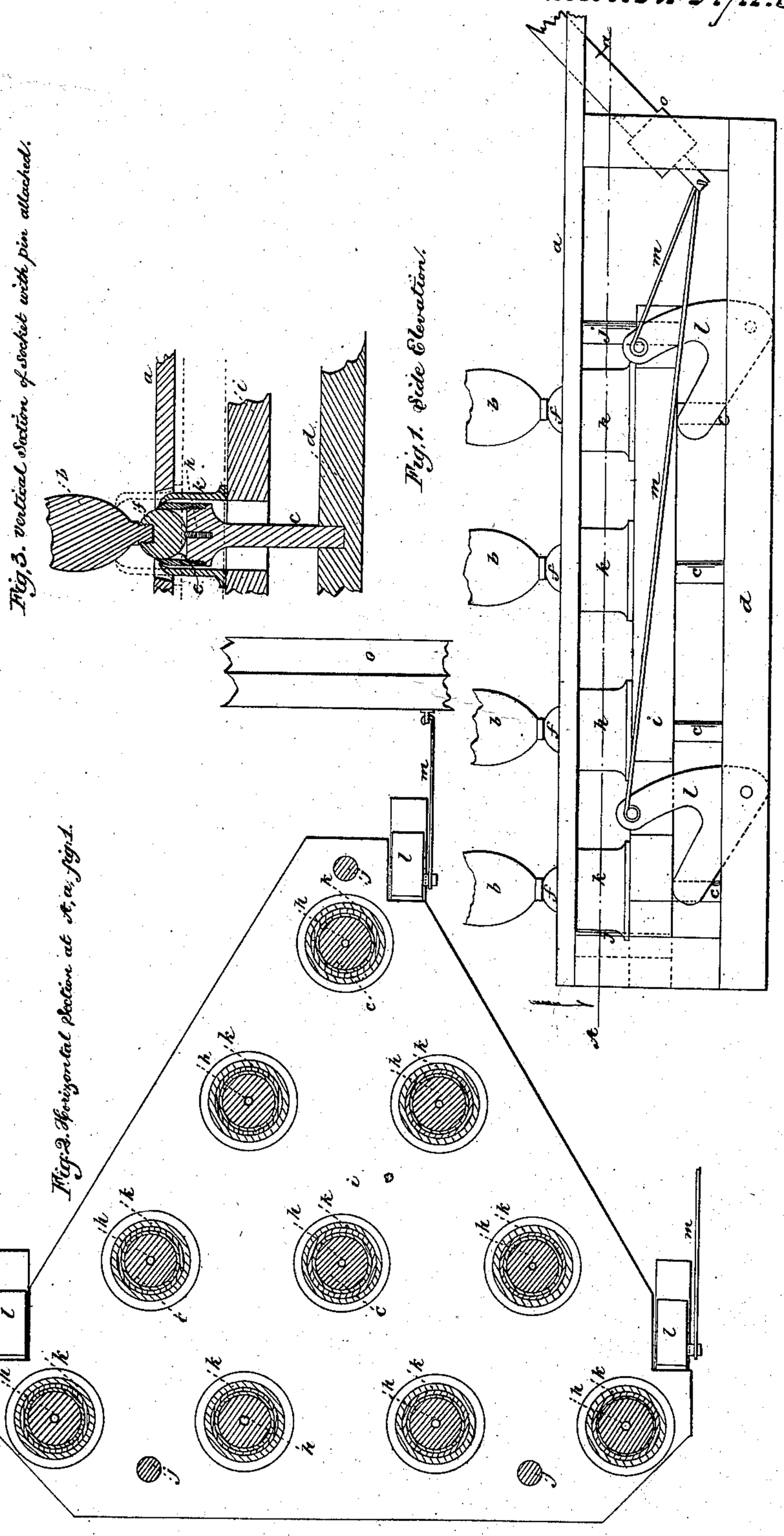

Fig. 1. Side Elevation.

Fig. 2. Horizontal section at A, a, fig. 1.

Fig. 3. vertical Section of socket with pin attached.

UNITED STATES PATENT OFFICE.

THOMAS J. SLOAN, OF NEW YORK, N. Y.

APPARATUS FOR SETTING UP TEN-PINS.

Specification of Letters Patent No. 8,027, dated April 8, 1851.

To all whom it may concern:

Be it known that I, THOMAS J. SLOAN, of the city, county, and State of New York, have invented certain new and useful Improvements in Bowling-Alleys and Pins Therefor, 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 side elevation, Fig. 2 a horizontal section on the line A, *a* of Fig. 1, and Fig. 3 a vertical section of a single pin with its socket.

The same letters indicate like parts in all the figures.

As bowling alleys are at present constructed with the pins detached from and merely standing upon the table, much time and trouble is lost in setting them up when knocked down by the players. Many serious inconveniences and sometimes accidents result from this state of things which it is the object and purpose of this invention to overcome and avoid. I propose to accomplish this by an arrangement for setting all the pins up by a single motion of a lever at what is called the head of the table, and by which also the pins are all brought at once into their proper relative positions.

The first part of my invention consists in making the bases of the pins spherical when this is combined with the use of a set of elevating sockets (one for each pin and each one movable on a fixed rod) and operated together by means of a board connected by levers or otherwise with a hand lever at or near the head of the table to cause the pins to rise.

In the accompanying drawings *a* represents the ordinary bowling table. I arrange my pins *b* in the same relative positions with respect to each other as is now practised. The bosses *c*, permanently attached to the frame *d* of the table, pass up through ten holes in the table to a level with it, the upper end of each being provided with a circular socket *e* in which fits the spherical base *f*, of the pins *b* which are sustained therein by the tension of a small spring *h* in the bottom of the said socket. The tension of this spring is just sufficient to sustain the pin in a vertical position. When the pins are struck by a ball thrown by a player, the tensive force of the spring *h* is overcome, and they fall over but not entirely to the table, as their ends are confined in the circular sockets *e*. When one pin is knocked from the force of the blow into this position, it rotates around the center of its spherical base and causes those pins within its reach to fall down.

In setting up the pins all together, the operation is as follows: Under the table and directly below the pins *b* is what I call the elevator *i* which is a board provided with ten holes directly opposite the ten holes in the table *a*. This elevator is horizontal and has a vertical motion on the bosses *c* and guided by the stud pins *j*. Between the table and the elevator, and surrounding the bosses *c*, are what I call the elevating sockets or rings *k*, which, when the pins are down and it is desired to set them up, are caused by the motion of the elevator *i* to bear against the shank or largest part of the pins and rise through the table in the position seen in dotted lines in Fig. 3, until the pins are all brought into a vertical position in which they are sustained by the tension of the small spring *h*, in connection with the circular sockets *e* as before described. The elevating board being then lowered the elevating sockets sink to a level with the surface of the table and the pins are ready to receive another ball.

Motion is communicated to the elevator by means of the forked levers *l* and inflexible rods or connections *m* from the hand lever *o* at the head of the table or by any other arrangement desired. The balls are returned by means of inclined ways or otherwise.

The advantages of my improvements consists in the saving of time and labor in setting up the pins, saving the expense of an attendant for performing this duty, and the absence of liability to accident to persons from the flying of the pins or balls.

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

Elevating the pins of a bowling alley by means of a set of elevating sockets operated from the head of the table when this is combined with any well known device or devices which will permit the pins to fall and sustain them in a vertical position after they are elevated, substantially as described.

THOS. J. SLOAN.

Witnesses:

ALEX. PORTER BROWN,

GEO. W. EICHELLS.