

BILLIARD-TABLE.

Patented April 4, 1876.

Fig. 3.

A perspective view of a mechanical assembly. It shows a cross-section of a block with internal features labeled A, E, C, and F. A base with a slot labeled z is visible at the bottom.

A perspective view of a rectangular frame with a central longitudinal slot. Four circular components, labeled A, B, C, and D, are positioned within the slot. Component A is at the top, B is below it, C is further down, and D is at the bottom. The frame has a raised edge on the right side.

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IMPROVEMENT IN BILLIARD-TABLES.

Specification forming part of Letters Patent No. **175,666**, dated April 4, 1876; application filed March 8, 1876.

To all whom it may concern:

Be it known that I, HUGH W. COLLENDER, of New York city, in the county of New York, in the State of New York, have invented new and useful Improvements in Billiard-Tables; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to certain new and useful improvements in the construction of the body portion or bed-supporting frame of billiard-tables, and has for its objects to render the structure stronger and more durable, and at the same time save labor in the construction and cheapen the manufacture of the tables.

Previous to my invention it has been customary, in putting together the body and frame-work of the table, to cut away the stock of the cross-beam and longitudinal beam (or beams) and halve them together, and cut rectangularly-shaped grooves on the inner surface of the side and end "broad-rails," to accommodate tenons formed on the ends of the cross-beams, and to secure the latter in place by bolts, fastening their ends to the broad-rails. As is well understood, the top surfaces of all the cross-beams should be leveled off flush with the top edges of the four broad-rail sides of the table, so that the bed, or the slabs composing the bed, shall have as complete and perfect support as possible at all points; and it is well understood that it is important to have the frame-work which supports the bed as strong and durable as possible, with the least amount of stock. In the known and practiced mode of construction, not only are the cross-beams weakened by being halved together, but the broad-rails are also weakened by the cutting away of this stock near their middles, to effect the framing into them of the ends of the cross-beams. I propose to not only avoid all the cutting that must tend to weaken the frame-work, but also to save all the labor and expense of making slots and tenons, &c., and at the same time to produce a more rigid, strong, and durable frame-work, with the same amount or less stock, than is possible with the usual mode of manufacture; and to these ends my invention

consists in the use, in connection with the broad-rails and cross-beams, of metallic shoes or socket-like castings, so constructed and combined with the wooden broad-rails and cross-beams as to permit a rigid interlocking of the parts of the frame-work without any cutting away to weaken the stock, and effect a perfect support of the cross-beams by the broad-rails, as will be hereinafter more fully described.

To enable those skilled in the art to make and use my invention, I will proceed to more fully describe it by reference to the accompanying drawings, in which I have illustrated my invention as applied to that kind of billiard-table invented by me, and now almost exclusively used in this country, known as the "bevel" table.

Figure 1 is a top or plan view of the table with the bed and cushion-rails removed. Fig. 2 is a longitudinal vertical section of the same at *x x*, Fig. 1. Fig. 3 is a vertical cross-section at the line *y y* of Fig. 1. Fig. 4 is a perspective view of one of the middle shoes or castings detached, and Fig. 5 is a similar view of one of the shoes or casting that are arranged at the ends of the cross-beam.

In the several figures the same part will be found designated by the same letter of reference.

A A' are the side, and B B' the two end, broad-rails or sides of a bevel billiard-table. C is the cross-beam, and D D' the longitudinal beam. The upper edges or surfaces of the four broad-rails and the longitudinal and cross beams are, as usual, all flush or in the same plane, and upon them all are placed and secured, in the usual manner, (not shown in the drawings,) the slabs composing the bed of the table. The cross-beam C is located about midway of the length of the table, and is combined with the side broad-rails A A' in the following manner: Upon the inner face of each of said broad-rails is placed and secured a cast-iron shoe or socket piece, E, into which fits one end of the cross-beam C, and from said beam passes through said shoe-piece E an obliquely-arranged bolt, *f*, which engages with a nut, *i*, let into the stock of the broad-rail, as clearly seen at Fig. 3.

The form of the casting E will be perfectly ap-

parent from an examination of Fig. 5 and the other views in the drawings. It will be seen that said casting is plain or flat on the side next to the broad rail, with the exception of two small projections or lugs, *g*, which enter the broad-rail for the purpose of securely holding the shoe E in place, (a small screw merely being used to fasten the shoe to the broad-rail,) and that the other side of the shoe-piece E is formed with flanges at the two sides and its bottom, so as to make a sort of housing, into which the end of beam C is inserted vertically, and in which it is retained; the side flanges bearing against the sides of the beam C, and the lower edge of the latter resting or bearing upon the bottom flange of said shoe E. It will be observed that the hole *k* in shoe E is made oblong and of a length greater than is sufficient to merely accommodate the bolt *f*. The object of thus shaping the hole *k* is to permit the parts to be drawn together after the insertion of the bolt, both in first putting the parts together and at any subsequent tightening up of the frame of the table.

Upon the sides of the cross-beam C, near its middle, (and directly opposite each other,) are arranged two castings or shoe-pieces, H, made very much after the fashion of the shoes E, but without any bolt-holes through them.

In these metallic housings H are arranged the adjacent ends of the two parts or pieces of timber D D', which make up the longitudinal beam of the frame, and the other ends of which are seated in shoe-pieces I I, secured to the end broad-rails, near their centers, as shown.

The castings H have their lugs *m* made of such a length, compared with the thickness of beam C, that when put in place on said beams said lug will come together, as shown; the advantage of which arrangement is, that should the beam C shrink in width (which it is always liable to do to some extent) the shoes on either side of it will still maintain their proper relation to form immovable abutments for the ends of pieces D D'. In the improved plan of construction shown, shorter stuff can be worked up for the longitudinal beams, and the frame-work at the same time be stronger than that kind heretofore made; and the ends of the several beams being incased in and resting upon the lower supporting-flanges of the metallic housings, the wood-work must necessarily be more securely and permanently held together than in a structure in which the wooden parts come in contact with each other.

By making the castings as shown, with the lugs or teats on the faces that come adjacent to the wooden portions to which they are secured, their solid connection, with such wooden parts is effected by simply boring a few auger-holes of slight depth in the broad-rails and cross-beams—an operation requiring little labor and not practically affecting the original stock of the frame-work.

Although I have shown my invention as embodied in the frame of a bevel table, it will be understood of course that it can be carried into operation with equal facility and the same advantages in tables having their bodies differently shaped; and it will also be understood that the precise form and size of the castings is not material, so long as they are so constructed as to properly hold laterally, and vertically support, the ends of the wooden beams or portions, substantially as set forth.

Having so fully described my new construction of billiard table frames that any skilled manufacturer can readily make and use my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the side broad-rails and a cross-beam, metallic shoe-pieces or holder-plates, and a bolt or nut, or other device, for fastening the parts together, substantially as and for the purpose set forth.

2. In combination with the cross-beam of a table-frame and the longitudinal beams or bars, metallic shoe-pieces adapted to be secured on either side of the cross beam, and to hold laterally and vertically support the ends of said longitudinal beams, substantially as described.

3. In combination with the end "broad-rails and longitudinal beams or bars, metallic stands adapted to hold laterally and vertically support the ends of said longitudinal beams, as set forth.

4. Shoe-pieces or castings adapted to be secured upon the opposite faces or sides of the cross-beam, and having teats or lugs, which penetrate the beam and come together, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand and seal this 4th day of March, 1876.

H. W. COLLENDER. [L. S.]

Witnesses:

J. N. MCINTIRE,
JACOB FELBEL.