

H. W. COLLENDER.
BILLIARD-TABLE.

No. 170,059.

Patented Nov. 16, 1875.

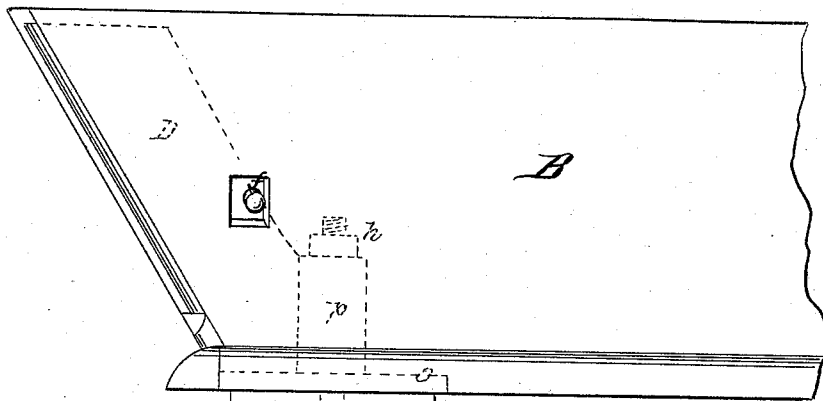


Fig. 1.

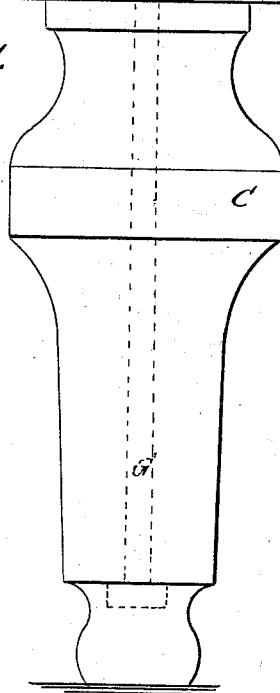
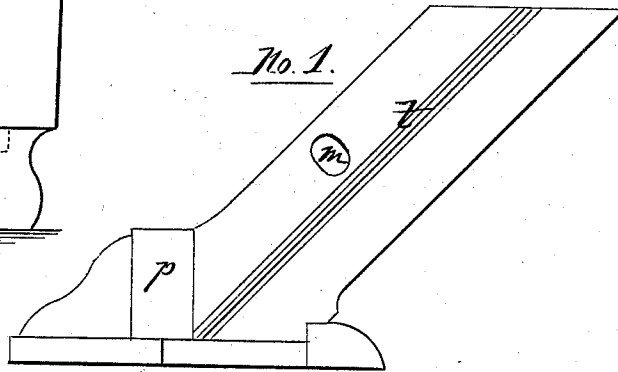
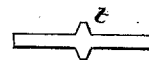


Fig. 4.

No. 1.



No. 2.



Witnesses:

E. Wolff.
Jacob Belbel

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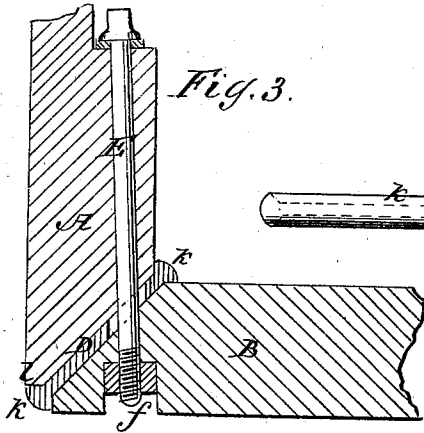
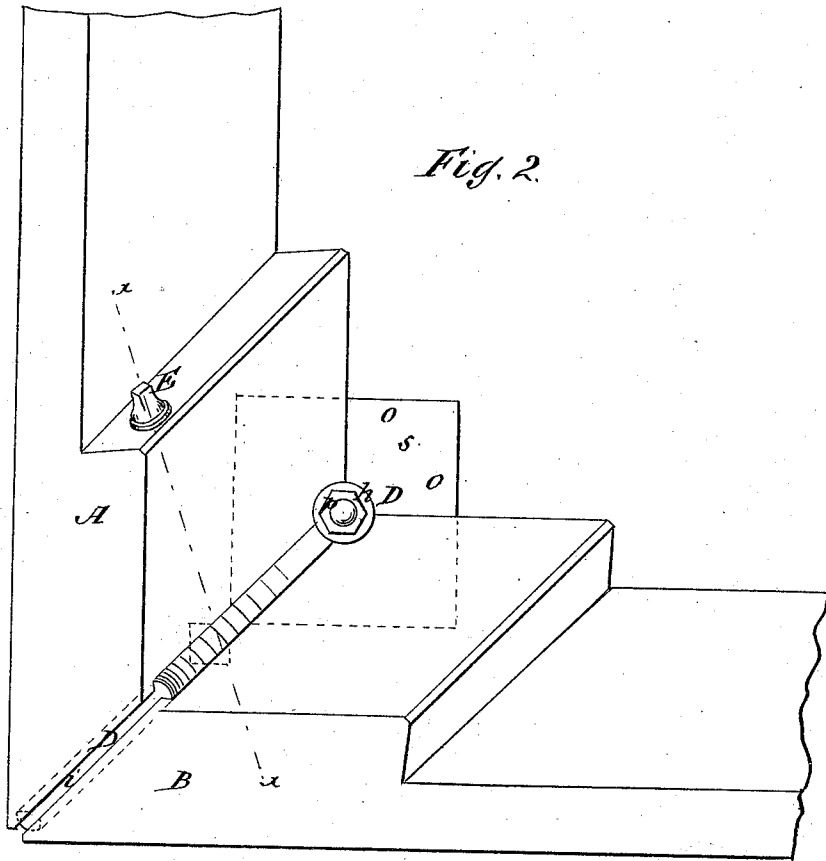
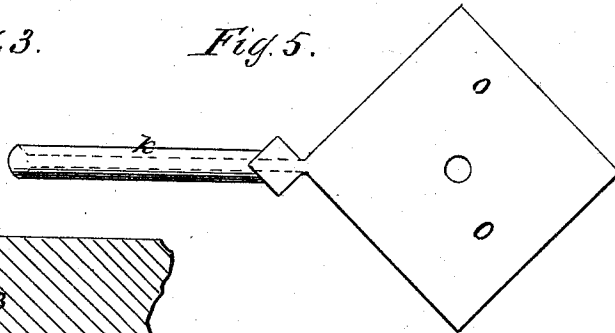


Fig. 3.

Fig. 5.



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UNITED STATES PATENT OFFICE.

HUGH W. COLLENDER, OF NEW YORK, N. Y.

IMPROVEMENT IN BILLIARD-TABLES.

Specification forming part of Letters Patent No. **170,059**, dated November 16, 1875; application filed September 28, 1875.

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 certain Improvements in the Construction of 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.

Previous to my invention it has been the custom, in the manufacture of billiard-tables, to employ corner blocks or pieces of various shapes and sizes, according to the design and magnitude of the table, located one at each corner of the table, and to have the ends of the "broad-rails" or side pieces of the table-body framed into, and properly secured (by bolts or otherwise) to, said corner-pieces. The practical necessity for the use of such corner-pieces, and the reasons for the mode of construction heretofore adopted, are well known to the skilled manufacturer of tables.

In the first place, a billiard-table being a structure which must possess the combined characteristics of rigidity and strength, and capacity to be readily taken down, or to pieces, and reunited or set up, means for the best possible support, at all points, of the heavy slabs composing the bed, and capacity to withstand, to the greatest possible extent, the tendency to distortion by the shrinkage and warp to which all wooden structures (especially those to be used indoors) are liable, it follows that with the previously-known methods of construction the employment of corner pieces or blocks was most desirable.

It would not be practical to bring together and miter the adjacent ends of the broad-rails, and dispense with the corner-blocks, not only because of the difficulty of making a strong union of these separable parts, and the certainty of warp and shrinkage of the ends of the broad-rails, but also because of the lack, in such method of construction, of a proper amount of stock, or disposition of it, to effect a strong and durable securement (in the proper locations) of the legs of the table to the body. Indeed, practice and experience have demonstrated long ago that even the "cushion-rails" of a table, which are very much

lighter, and more readily held in place, than the broad-rails, cannot be successfully mitered at their junctions at the corners of the table, and hence the now universally practiced method of overlapping them, as well understood. But in the construction of tables with the usual corner blocks or pieces, serious objections are inevitable, among which are most prominent these, viz: In the first place, as the corner blocks or pieces, to which the ends of the broad-rails are secured by tenons, and mortises, and bolts, must be set with the grain running up and down, while that of the broad-rails runs horizontally, or at right angles to that of the blocks, it follows that these corner-blocks must have their upper surfaces located below the plane of the upper edges of the broad-rails, or else, as the latter shrink, they would leave the bed of the table supported only at the extreme corners on the corner-blocks, and the bed would be thrown out of level, and its joints destroyed, and the consequence of this necessary location of these corner-blocks with their upper surfaces out of contact with the bed is, that the bed of the table is wholly unsupported at its four corners—a consequence most objectionable, not only on account of the liability of the corners of the slab to get fractured, but also on account of the vibration and noise occasioned by the balls when struck at this part of the table. In the next place, the corner-blocks and broad-rails being necessarily united or secured together by means of bolts and nuts, it follows that, from the inevitable shrinkage of the corner-blocks crosswise of the grain, the connection or union between these blocks and the ends of the broad-rails soon becomes imperfect, no matter how thoroughly the table may have been set up; and the consequence is, a bad condition of the table, and the necessity for frequent manipulation by a mechanic to keep the table properly together and in level.

The foregoing explanations refer, with equal pertinence, to all kinds of billiard-tables; but in that kind known as "bevel tables" (first introduced into use by me, and now almost universally adopted) the objections alluded to become rather greater than they were in the square or vertical sided tables, because in the adoption of this bevel form of table-body not

only was it still more difficult to dispense with the corner-pieces, but the corner-blocks had necessarily to have a larger area on top, and the consequence was that a still greater extent of the table-bed was left unsupported at each corner.

I have obviated, heretofore, this aggravation of the evil in the bevel tables by an ingenious form and adaptation of corner-block, not made the subject of any application for Letters Patent; but by my present invention I propose to overcome wholly all the difficulties to which I have alluded, and afford a method of construction which is, at the same time, in every way more desirable, both in point of perfection and economy of manufacture, than any heretofore known; and to these ends and objects my invention consists in the employment, in combination with the broad-rails, of a union-plate or interposed device, made preferably of cast-iron, so constructed as to firmly seat the ends of the broad-rails, which abut against its opposite sides, and adapted to permit the passage through it of a suitable bolt or bolts, operating to draw and hold the ends of the broad-rails toward each other, and thus clamp the said union-plate or interposed casting securely between them.

And my invention further consists in making or providing the said interposed plate or casting with an extension or projection of suitable size and shape, to which the upper part of the leg of the table (at each corner thereof) may be securely bolted.

And my invention further consists in making the device employed to house or seat and securely hold in place the ends of the broad-rails, (between which it is clamped,) in such form or manner as to cover over the outside corner-joint, and also serve to make a neat, strong, and durable finish to the corner of the table-body.

To enable those skilled in the art to make and use my invention, I will proceed to more fully describe it, referring by letters to the accompanying drawings, in which—

Figure 1 is an elevation of so much of a billiard-table as it is necessary to show in order to perfectly illustrate my invention. Fig. 2 is a plan or top view of the parts seen in elevation at Fig. 1. Fig. 3 is a horizontal section at the line *xx*, Fig. 2. Fig. 4 is an elevation or side view of the union-plate or casting detached, and Fig. 5 is a bottom view of said casting.

At diagrams No. 1 and No. 2 I have shown, in side view and cross-section, a casting somewhat different from that shown in the figures of the drawings, and which will be alluded to hereinafter.

In the several figures the same part is designated by same letter of reference.

A and B represent portions, respectively, of a side and end broad-rail of bevel billiard-table put together after my improved plan of construction of tables. C is one of the legs of the table, and D is the cast-iron union-plate

or rail-securing device. E is a bolt, with nut *f*, for bolting together the broad-rails A B and interposed casting D, and G is the usual leg-bolt, provided with a nut at *h*, and by means of which the leg is securely bolted to the proper part of the casting D.

The broad-rails A and B are made about as usual, except that their ends are simply sawed off plain at the proper angles to come to a miter. The casting D, or interposed holder-plate, is made with its part *i* in the shape of a thin flat plate, of equal thickness throughout, (of the contour shown,) and with ribs or projecting beads on its two parallel edges, as seen at *kk*, and of such width at the part *i* as that the plain sawed-off ends of the rails A B will just cover each side of this plate-like portion *i* completely from one to the other of the edge ribs or beads *kk*. (See Figs. 2 and 3.) The outer edge of the end of each rail A B is chamfered off slightly, as seen at *l*, Fig. 3, so that the outer face of the rail will come nearly flush with the outer rib *k*, to form a neat finish at the outer corner of the table-body.

The fastening-bolt E is, by preference, inclined somewhat downward and inward from its head toward the let-in nut *f*, in order to have the nut seated more thoroughly and afford a sufficient hold on the stock where the nut takes its bearing. *m* is a hole made through the flat portion *i* of the casting, somewhat larger than the bolt E, to permit said bolt to pass through and the parts to be drawn securely together. The casting D is made with a horizontal plate-like portion, *o*, and vertical hollow cylindrical part or hub *p*, as clearly shown. The purpose of the flat extension *o* is to serve as a rest and bearing on top of the leg C, as seen, and the hub *p* is to permit the ready and strong securement of the leg to the casting by means of the bolt G, which passes up through and is fastened by nut *h* in said hub. *s* is a web-like brace, for the simple purpose of affording strength to the casting.

The precise pattern, size, and proportions of the casting D may, of course, be varied to suit the kind of table, and in accordance with the judgment of the manufacturer.

In lieu of having edge ribs *kk*, and the ends of the rails A B confined or retained laterally between them, as shown, the casting D may be made with one or more ribs, *t*, as indicated at diagrams Nos. 1 and 2, located near the middle of part *i*, and the ends of the rails A B may be grooved out for the reception of said ribs *t*; but in the use of edge ribs *kk* it will be seen, the ends of rails A B are as securely housed, or held laterally in place, and all trouble and expense of grooving the ends of said rails are avoided.

It will be seen that by my new method of construction not only are all the labor, expense of mortises, tenons, and other cutting and fitting up of the ends of the rails A B rendered unnecessary, but that the adjacent ends of said rails are so firmly united with each

other and the interposed casting by a single bolt as to render the structure more solid and capable of retaining its perfect union of parts longer than a table made in any of the heretofore-known ways. It will, of course, be understood that in a table built according to my invention the upper edges of the broad-rails extend clear up to each other at the corners of the table, and that therefore the bed of the table may be supported at the corners of the latter on the rails, and in a much more complete and desirable manner than is possible where corner-blocks are employed, while, at the same time, the supporting body or frame of the table can be made as strong as, if not stronger than, when such blocks are used, and much better than is possible by any method which dispenses with the blocks that was heretofore known; and it will be also understood that since the body of the table is composed of only the broad-rails bolted together, as shown, at the corners, the perfect union of the parts is not liable to be destroyed by any ordinary amount of shrinkage in the parts.

By the employment of an extended portion, *o*, and bolt-socket *p* in the casting, as shown, or the use of such devices in connection with a corner-plate, (the two parts securely united,) I am enabled to afford not only a better bearing of the table-body on the legs, but can more firmly and readily secure the legs rigidly to the table.

The external edge rib *k*, when used, may, of course, be made of any size and pattern to suit the maker, and afford a handsome finish to the corner of the table-body; and, in lieu of the plane portion *i*, the interposed device for interlocking and holding in place the ends of the rails A B may have substituted for such part of the casting separate means for tying together the ribs or portions which serve to hold the ends of the broad-rails in place in the direction of the plane of the miter or joint.

The several features of my invention may, with more or less advantage, be used separately, and some one or more of them may, of course, be applied in the construction of other articles of furniture than tables designed for billiard-playing, though my invention is most particularly adapted to such tables.

Having so fully described my improvements in the manufacture of billiard-tables that any skilled person can readily comprehend them, and wishing it to be understood that I lay no claim to any peculiarities of construction in tables having their frames or bodies composed wholly of metal, what I claim as of my invention, and desire to secure by Letters Patent, is—

1. In combination with a side and end broad-rail, or with two sides of a wooden-frame table, an intermediate or interposed device or piece adapted to hold the ends of such broad-rails or table-sides in place laterally, substantially as described.

2. In combination with a wooden-frame table, a stand or plate suitably made to give a bearing to and afford means of securement to it of the leg, when such stand or leg-holding device is cast with or rigidly united to the plate or casting, which is interposed and held fast between the sides of the table, as set forth.

3. A corner-plate or intermediate casting, formed or provided with a brad or rib adapted to cover the joint between the wooden broad-rails at the outer corner of their junction, substantially as and for the purposes set forth.

Witness my hand and seal this 27th day of September, 1875.

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

In presence of—

J. N. MCINTIRE,
JACOB FELBEL.