

(No Model.)

L. KASTOR.
BILLIARD TABLE.

No. 515,149.

Patented Feb. 20, 1894.

Fig. 1.

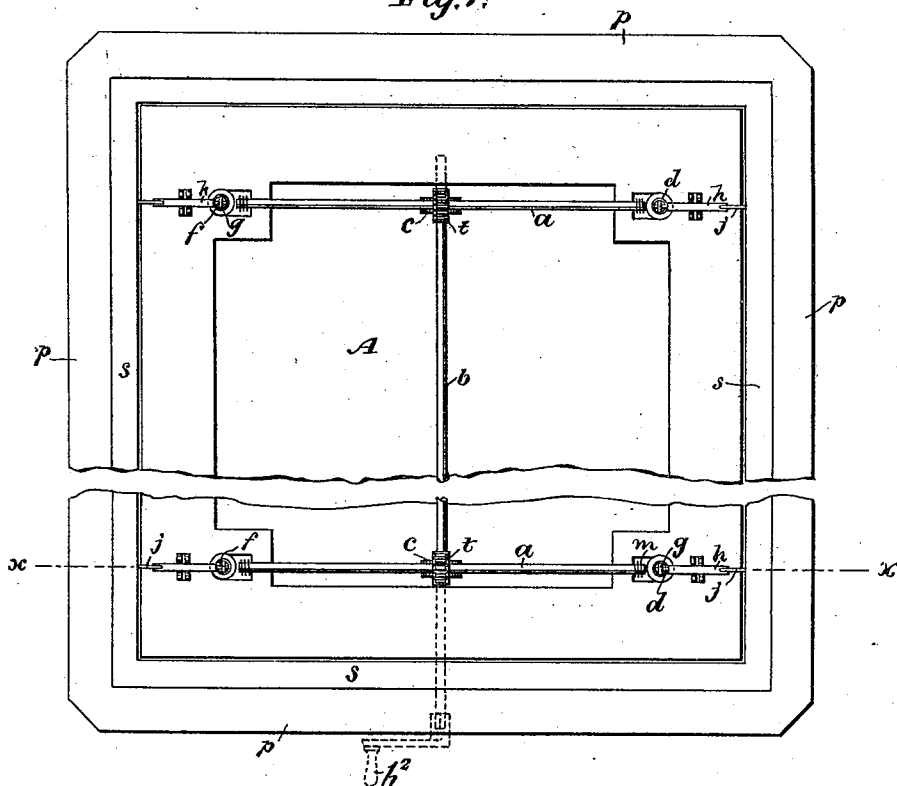


Fig. 2.

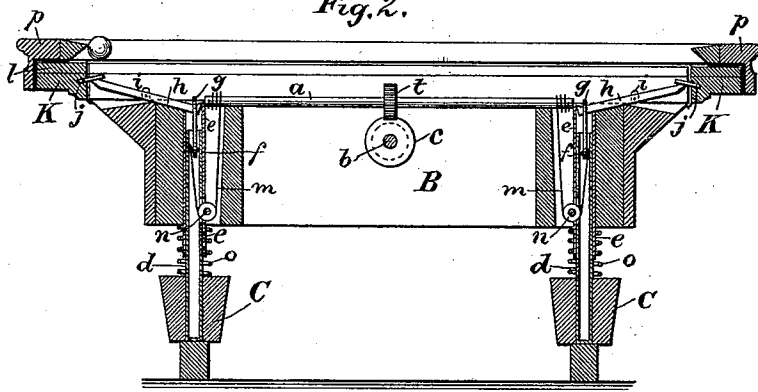
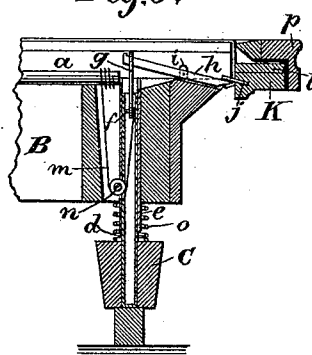


Fig. 3.



Witnesses:-

O. H. Hayward
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UNITED STATES PATENT OFFICE.

LUCIEN KASTOR, OF PARIS, FRANCE.

BILLIARD-TABLE.

SPECIFICATION forming part of Letters Patent No. 515,149, dated February 20, 1894.

Application filed November 20, 1893. Serial No. 491,402. (No model.)

To all whom it may concern:

Be it known that I, LUCIEN KASTOR, of Paris, France, have invented a certain new and useful Improvement in Billiard-Tables; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to what is sometimes denominated a convertible billiard and dining table—*i. e.*, a table which may be transformed from a complete billiard-table into an ordinary dining table; or one adapted to be used as such; or as a card table; drawing table, &c.

As is well understood by those skilled in the art to which my invention relates, a billiard table has its top surface at too great an elevation to be used for the purpose to which dining and other ordinary tables are put, and, furthermore, its upwardly projecting cushion-rails would interfere with the use of its top-surface for ordinary purposes, even were the bed lowered to an elevation corresponding with the average height of dining and other analogous tables. So that, to transform a billiard-table into one adapted to be used for other purposes, not only must its bed, or top surface, be lowered to adapt it to be used by a person seated, in a chair of usual height; but the cushion-rails must be gotten out of the way, in order to bring the entire top part of the table into a plane, or flat surface.

I have devised a novel construction of billiard table, of the species above alluded to (*i. e.* one which may be readily transformed into an ordinary table to sit at), the structural characteristics of which are, first, the combination, with a separately movable bed and cushion-rails, of mechanism for moving these parts, simultaneously, so that in lowering the bed of the table, the top surfaces of the cushion-rails, will be lowered to bring them into the same plane with the playing surface of the bed; and so that, in reconvert-
ing the table into one to play billiards on, these rails will be elevated above the playing surface of the bed, while the latter is raised to the proper elevation; second, the combination with the vertically adjustable cushion-rails, of fillets, or slab-like devices, of slate,

or some material much heavier than wood, to give substantially the same degree of stability to the cushion-rails that is possessed by those of the ordinary, non-convertible, billiard-table; in which the cushion-rails are secured to the heavy slate, or marble, table-bed.

To enable those skilled in the art to which my invention relates, to make and use convertible billiard and dining tables, according to my invention, I will now proceed to more fully describe the latter, referring by letters to the accompanying drawings which form part of this specification, and in which I have shown my invention carried into effect under those details of construction, and in that form, which I have, so far, followed in practice, though modifications may, of course, be made, without departing from the novel structural features I have herein shown and described.

In the drawings, Figure 1 is a top view of a table made according to my invention; portions of the bed proper, or playing surface, of the table being broken away, in order to render visible in this view some of the parts of the mechanism for raising and lowering the bed and cushion-rails. Fig. 2, is a vertical cross-section at the line *x, x*, of Fig. 1, showing the table adjusted for the purposes of billiard playing. Fig. 3, is a partial similar section, showing the table-bed lowered to the proper height for use as an ordinary table, and the cushion-rails adjusted to have their top surfaces flush with the top surface of the table bed.

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

A is the bed of the table composed, preferably (and, about as usual), of a series of slabs of slate, framed in wood, and properly arranged on the top of, and supported by, the body-portion B.

Surrounding the bed A of the table is a rectangular frame K, the interior dimensions of which correspond substantially with the perimeter of the bed A, and which is provided with a series of narrow slabs *l* of slate, or other heavy material, preferably, corresponding in thickness and specific gravity to the slabs used in the construction of the bed. This frame K, with its top facing of slate *l*, is of such width that, when the cushion-rails

p (which may be of the usual construction) with their attached cushions *s* shall have been secured thereto, the playing faces of the cushions will, as shown, be in about the same vertical planes with the inner vertical faces, of the said frame *K*, and its attached slabs *l*. This construction of separate frame *K*, *l*, with its attached cushion-rails, and the arrangement of these parts with the bed *A* as shown, permits the placement of the cushions and their rails in either the relationship to the bed *A* shown at Fig. 2, or that shown at Fig. 3; and the adjustment of these parts of the table, from one to the other of these two shown relationships, is effectuated by means which will be presently described.

C are the legs of the table of which, in the case shown, there are four; but instead of the body-portion *B* of the table resting directly upon these legs, and being directly sustained thereby, the body of the table is sustained, indirectly, by said legs *C*, through the media of certain intermediate devices, which also constitute parts of the mechanism by means of which the said body, with its usual bed *A* is raised and lowered, in effecting the transformations of the table; as I will now explain. Each leg is provided with a vertical, centrally arranged, metallic tube *d*, which fits and works telescopically within another tube *e*, that is securely fitted within the body-portion *B* of the table, and from a fixed device *f* within the stationary tube *d*, arranged near its upper end, extends downwardly within the tube a chain *m*; which, passing through lateral, vertical cut-outs, or apertures, of said tube, and the tube *e*, makes about a half turn around a sheave *n*, hung on a pivot mounted in the table-body, *B*, and passes, thence, upwardly to one end of a winding-shaft, *a*. As shown, there are two of these winding-shafts *a*, arranged transversely of the table-body, one near each end, and on these ends are two fast worm-gears *t*, which engage with two worms, or endless screws *c*, which are keyed fast on a drive-shaft *b*, that is, preferably, located beneath the winding shafts *a*, and that runs lengthwise of the table. This drive-shaft *b* is designed to be operated by a crank-handle *b*², which is adapted to be applied (like a wrench), as indicated by dotted lines at Fig. 1, whenever it may be desired to manipulate said shaft.

o are a series of strong spiral springs, one to each leg, that are arranged exteriorly of the telescopic tubes *d*, *e*, and which act, expansively, between the top surfaces of the legs *C*, and the under side of the table-body *B*, as plainly illustrated, to partially sustain the gravity of the table-body, and render easier the elevation of the same by the lifting mechanism shown.

j are stationary bearer-irons, or lugs, which are securely fastened to and project inwardly from the frame *K*, and by means of which, through the media of the metallic levers *h* (on the outer ends of which said bearer-irons

rest), the said frame *K* is supported, vertically.

The levers *h* are fulcrumed at *i* to the upper portion of the table-body, and have their inner ends coupled to the upper ends of link-bars *g*, each of which is linked, at its lower end around one of the before mentioned stationary devices *f* of the leg tubes *d*.

The table-body, at the locality of each pivoted lever *h*, is cut away as shown (see Figs. 2 and 3), so that when the table-bed and cushion-rails are in their higher-most positions (see Fig. 2), the inner arm of each lever can assume the position shown; and so that each lever can vibrate into the position seen at Fig. 3; when the bed and cushion-rails are fully lowered.

In operating the working parts of my improved table, to effectuate the desired transformations, the mechanism works as follows:—Supposing the table to be adjusted, or adapted for use as a dining-table (as illustrated at Fig. 3) to transform it into a billiard table, the wrench, or hand-crank *b*², is applied to one end of the drive-shaft *b*, and the latter is rotated in the proper direction, to cause the worms *c* to actuate the worm-gears *t*, and thus rotate the winding-shafts *a*, in the proper direction to wind up each of the four chains *m*, and as one end of each chain is made fast to the part *f* of tube *d*, it follows that this winding up of the chains on the shafts *a*, will lift the sheaves *n* which are hung in the depending loops of the said chains; and, as these sheaves have their arbors, or axes hung in the table-body *B*, the latter will, of course, be elevated. As the table-body is thus elevated, the levers *h* being pivoted at *i* to the said moving body *B*, and having their inner ends flexibly connected by the link-bars *g*, to the stationary devices *f* of the leg tubes *d*, said levers are forced to oscillate on their pivots from the position seen at Fig. 3 to that shown at Fig. 2; and this movement of said levers on their fulcrums effectuates the lifting of the frame *K*, relatively to the body portion *B* of the table, from the position shown at Fig. 3, into the relationship to the body *B* seen at Fig. 2. Thus, by the winding up of the chain *m*, in the manner shown and described, are the body *B* of the table and its combined frame *K* simultaneously elevated, from the condition shown at Fig. 3, to that seen at Fig. 2; the cushion-rail frame *K* traveling enough farther than the body *B*, in the same time, to effectuate the necessary change in the relationship of these parts. If the bed be not raised to the maximum height, the cushions will be lower relatively to the bed; hence, the adjustments can be made to vary the height of the cushion to suit balls of somewhat different diameters. This is a great advantage of my table.

During the operation of raising up the table-body, as explained, the expansive springs *o* aid in the lifting process; and in the reverse operation, when the crank-handle *b*² is turned in the opposite direction, to lower the table-

body and cushion-rails back to the positions seen at Fig. 3, these springs, having to be compressed, relieve the geared and other working parts of the table mechanism from undue strain and wear.

It will be seen that by the construction shown and described, I am enabled to provide for use a table which is easily convertible into an ordinary, level topped, table, and which, when adjusted for use as a billiard-table, has all the solidity of the bed and all the stability in its cushions to be found in the most approved form of non-convertible billiard table.

Having now so fully described my invention that those skilled in the art can practice the same, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the vertically adjustable body-portion and bed of the table; suitable supporting legs; and a mechanism

for raising and lowering said adjustable parts, of a separately adjustable, frame carrying the cushion-rails; and means for raising and lowering said frame, relatively to the table-bed; all substantially, as set forth.

2. In a billiard-table having a body-portion and bed vertically adjustable, and a cushion-rail supporting-frame movable up and down independently of the bed, the combination with said movable frame, of fillets, or slabs, of slate, or other heavy material, to render said frame equally stable with the bed of the table; as set forth.

In witness whereof I have hereunto set my hand this 7th day of November, 1893.

LUCIEN KASTOR.

In presence of—

M. E. FOXTEN,
WM. H. MYER.