A. H. STONE & E. O. BROSTROM.

LIBRARY EXTENSION TABLE.

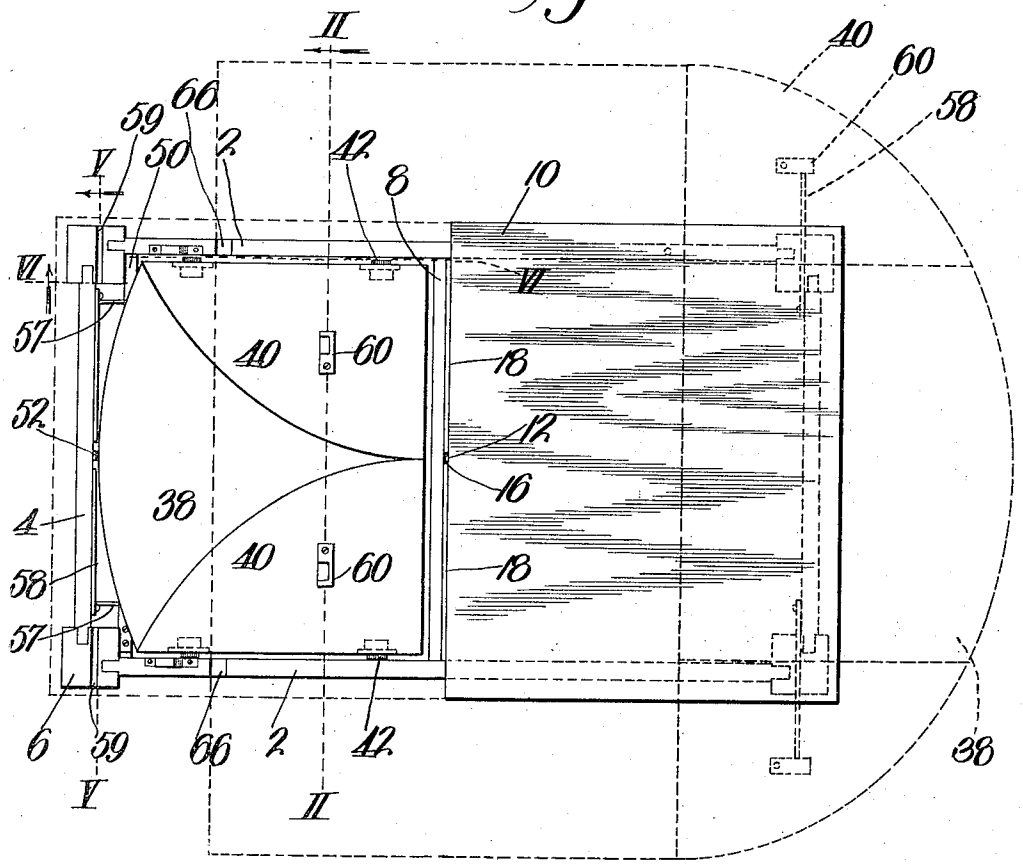
APPLICATION FILED JULY 16, 1913.

1,124,970.

Patented Jan. 12, 1915.

2 SHEETS—SHEET 1.

Fig. 1.



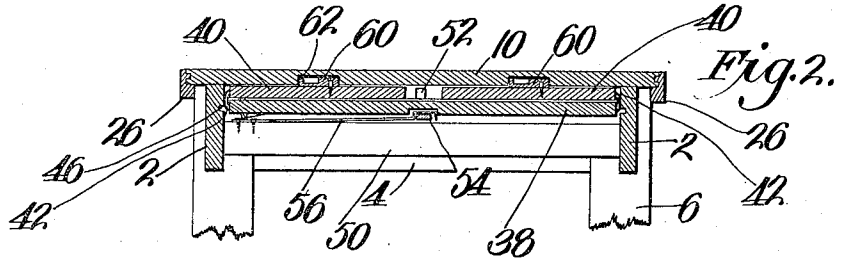


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

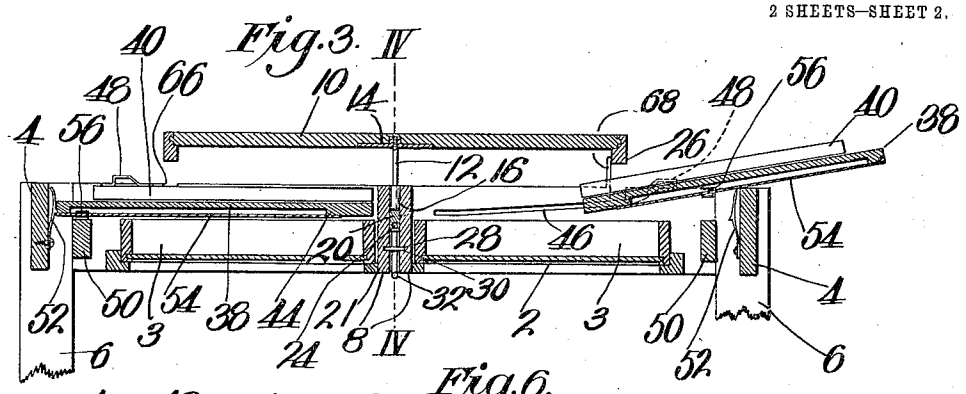


Fig. 6.

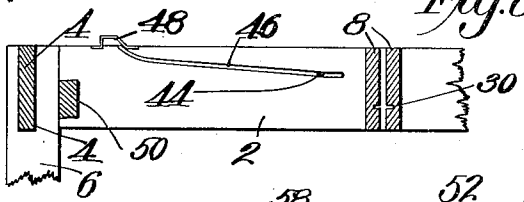


Fig. 5.

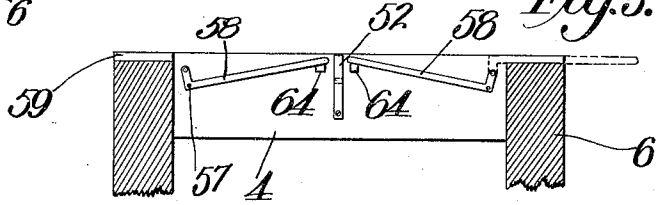
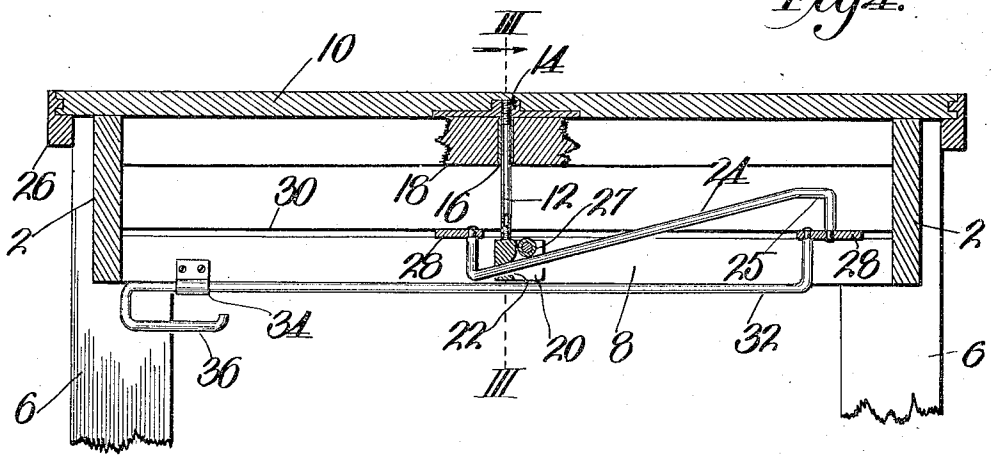


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LIBRARY EXTENSION-TABLE.

1,124,970. Specification of Letters Patent. Patented Jan. 12, 1915.

Application filed July 18, 1913. Serial No. 779,751.

To all whom it may concern:

Be it known that we, ANDREW H. STONE and ERNEST O. BROSTROM, citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Library Extension-Tables, of which the following is a specification.

This invention relates to library extension tables and the primary object in view is to devise a table of this character, which when folded, will present the appearance of the usual form of library table but when extended will assume the form and proportion of the usual type of dining table.

To this end the invention comprises various novel and peculiar features of construction whereby a simple, strong and compact article is obtained and one which will operate readily and efficiently and present a pleasing appearance in either of the forms which it is adapted to assume.

The nature of the invention is fully disclosed in the following specification of which the accompanying drawings form a part, after which the particular features of our improvement will be pointed out and claimed.

In the drawings, Figure 1, is a top plan view of the table with a part of the top broken away to disclose the extension parts, the dotted lines showing position of the top and the extension parts in unfolded position. Fig. 2, is a vertical section on the line II—II of Fig. 1, with the table drawer omitted. Fig. 3, is a vertical longitudinal section through the table, being along the line III—III of Fig. 4 but showing the top raised and turned and one set of the extension leaves partly withdrawn. Fig. 4, is a vertical transverse section through the table along the line IV—IV of Fig. 3 but with the top in lowered position. Figs. 5 and 6 are vertical sections along the lines V—V and VI—VI respectively of Fig. 1.

Referring to the drawings in which similar parts are designated by like reference numerals throughout, the table comprises the usual oblong frame found in library tables and which is made up of side and end pieces 2 and 4 respectively, having corner legs 6. Drawers 3 are mounted in any suitable manner to be withdrawn through the sides 2. Extending transversely between the side pieces 2 is a pair of cross strips 8 designed as a support for the top raising mechanism. The top 10 is of approximately the same dimensions as the oblong frame and adapted to fit over said frame when used as a library table, or to be swung around at right angles to said frame, as designed in dotted lines in Fig. 1, when converted into a dining table. To this end the top is pivoted upon a rod 12, the upper end of which is fastened in a plate 14 countersunk in the under surface of the table top. The rod passes through a sleeve 16 mounted rigidly between strips 18 carried by and between the cross strips 8, and the lower end of the rod is swiveled to a block 20 which has a passage 22 for an inclined top lifting arm 24. The arm 24 is for the purpose of raising the top vertically so as to permit the marginal portions 26 thereof to clear the supporting frame and allow the top to be turned and also to provide access to the extension leaves as hereinafter described, and is flattened at 25 to guard against the table top lowering by gravity along the inclined arm 24 after the latter has raised the top. A roller 27 is journaled in the block 20 for engagement with the arm 24 to facilitate the operation of the latter. The arm 24 is provided with angular extensions at its ends for securing the same to a pair of guide plates 28 which are adapted to travel in grooves 30 formed in the members 8. To one of said plates is connected a transversely extending rod 32 which passes through a guide member 34 near one side of the table and is provided with a hand loop 36 whereby the rod may be manipulated to operate the top raising mechanism.

Beneath the top at each end of the table when the same is in library table form, is folded an extension, comprising three folding leaves, a middle leaf 38 of approximately the same size as the space inclosed by one half the oblong frame, as shown in Figs. 1 and 3, and two side leaves 40 connected by invisible hinges 42 to the sides of the leaf 38. Each leaf 38 is provided with a pair of guide pins 44 near its inner end adapted to travel in inclined guide ways 46 formed in the side members 2 which guideways communicate with brackets 48 mounted upon the tops of the side members near the ends of the table frame. This construction affords a convenient means for guiding and properly positioning the extensions when it is desired to withdraw the same for use. When in folded position, the outer end of

each leaf 38 is supported upon a cross piece 50 and retained in this position by means of a latch 52 carried by the adjacent member 4. The bottom surface of each leaf 38 is recessed and provided with a bar 54 underlying the recessed portion so as to form therewith a guide way for the inner end of a transverse spring 56, the outer end of which is secured to the adjacent cross piece 50. This spring 56 tends normally to force the extension members upward as shown at the right hand end of Fig. 3 and thereby facilitate their withdrawal. When the leaves 40 are swung outward upon the hinges 42 they are supported partly by the corners of the table and partly by arms 58, each of which is pivoted at one end to one of the end members 4 and rested in a groove 59 in the corresponding leg piece 6. For retaining the leaves 40 engaged with the arms 58, buttons 60 are provided on the bottom surfaces of said leaves which buttons may be swung over the ends of the arms. When the table is folded these buttons are received in recesses 62 in the bottom surface of the top 10. The arms 59 are provided with pins 57 extending inward and in position to engage the extension members 38 when the arms 58 are not in use whereby on being swung outward the pins 57 will coöperate with the springs 56 to raise the extension members off the cross piece 50.

A spring-actuated plunger 68 is mounted in the top edge of one of the side members 2, and serves as a stop for limiting the turning movement of the top. This plunger is depressed by the top when the latter is over the plunger, but when the top is turned the plunger springs up into the path of the marginal portion 26. The plunger is depressed automatically when it is desired to restore the top to original position.

To summarize the steps which are followed in changing the table from one form to the other, the same may be stated briefly as follows: Assuming that the table leaves are folded, that is with the article in the form of a library table, the top is lifted through the arm 24 by pulling out on the loop 36. When thus raised the top may be turned to the position indicated by the dotted lines in Fig. 1, which provides room for the manipulation of the extension leaves. The latches 52 are then drawn back, which releases the leaves and allows the arms 58 to be swung out to coöperate with the springs 56 to project the extension members upward, whereupon they may be drawn out as illustrated to the right in Fig. 3. When fully withdrawn the leaves will rock into horizontal position with the pins 44 in the brackets 48, after which the hinged leaves 40 may be swung out and supported upon the arms 58 and latched thereto by the buttons 60. After the extension leaves are thus adjusted the top 10 will be again lowered by pushing on the loop 36 and rod 32 so that the top will rest flush with the extension members, in which position its marginal portions will be received in notches 66 provided in the side members 2.

From the foregoing it will be apparent that we have produced a library extension table possessing the features of advantage enumerated as desirable, and while we have illustrated and described one embodiment which our invention may take, we wish it to be understood that we reserve the right to all changes and modifications falling within the spirit and scope of the appended claims.

We claim—

1. In an article of the class described, a suitable frame support, a swinging top, a fixed vertical pivot depending centrally from the top, means for raising said top by applying a lifting pressure on said pivot, suitable extension leaves supported beneath said top and adapted to be withdrawn when the top is raised and turned, and fitted against the sides of the top after the latter has been again lowered, and means for guiding said extension leaves while being withdrawn.

2. In an extension table, the combination of a suitable frame support, a horizontally swinging top carried by said frame support, folded extension leaves carried beneath said top, means for raising said top in position to withdraw said leaves, and springs for initially raising said leaves in position to be withdrawn.

3. In an extension table, the combination of a frame support, a horizontally swinging top carried by said frame support, folded extension leaves carried beneath said top, inclined guide-ways formed in said frame support, means provided on said extension leaves for engaging said guide-ways, and a slidable rod suitably arranged and supported and provided with a cam or inclined portion for applying upward pressure for raising said top without interfering with its capacity for horizontal swinging movement after being raised.

4. In an extension table, the combination of an oblong frame support, an oblong top pivoted on said frame support about a vertical axis, a set of folding extensions carried beneath each end of said top, and a rod slidably mounted beneath the table top and provided with a cam or inclined portion for applying upward force when longitudinally adjusted for raising said top to withdraw said extensions when the top is turned, said extensions being adapted to be unfolded and fitted against the sides of said top when the latter is again lowered.

5. In an article of the class described, an oblong frame support, an oblong top piv-

oted upon said frame support about a vertical axis, means connected with the pivot of said top for raising the same vertically, foldable extensions carried by said support beneath the top, and means for guiding said extensions out from beneath the top when the latter is raised, said extensions being adapted, when unfolded, to fit against the sides of the top when the latter is lowered into position at right angles to the frame support.

6. In an article of the class described, a frame support, a top adapted to be raised and turned at right angles to said support, foldable extension leaves carried within each end of the frame support beneath said top and adapted to be withdrawn when said top is raised, said top and extension leaves being constructed and arranged to fit together in horizontal alinement in the turned position of said top after the latter is again lowered, and pivoted arms carried by said frame support for supporting certain of said leaves when unfolded, said arms carrying means for initially raising said leaves in position to be withdrawn.

7. In an extension table, the combination of a frame support, a top adapted to be raised and turned at right angles to said support, folding extension leaves carried within each end of the frame support and adapted to be withdrawn when said top is raised, said top and extension leaves being constructed and arranged to fit together in horizontal alinement in the turned position of said top after the latter has been again lowered, and arms carried by said frame support and adapted to be extended in position to support certain of said leaves when unfolded.

8. In an extension table, the combination of a frame support, a top resting upon the frame and adapted to be raised and rotatably turned in a horizontal plane to a position at right angles to its position before being raised, folding extension leaves carried within the ends of the frame support and adapted to be withdrawn over the ends of the frame support when the top thereof is raised, said top and extension leaves being constructed and arranged to fit together in the same horizontal plane in the turned position of said top after it is again lowered, arms pivoted at the ends of the frame support and at points in fixed relation thereto, and means secured to the undersides of parts of the foldable extension leaves, for engagement by the free ends of said pivoted arms.

9. In an extension table, a suitable frame support, a table top adapted to be raised and turned to a position at right angles to its initial position and then lowered so as to rest transversely upon said frame, a foldable extension leaf normally supported within the frame and at each end thereof, each extension comprising a middle leaf and two side leaves hinged to the middle leaf and normally resting thereon; said leaves being adapted to be withdrawn from within the frame over the adjacent ends thereof while the table top is elevated and before it has been lowered; said middle and side leaves being adapted to abut edgewise against each other and said table top after the same is lowered, and arms pivotally supported from the ends of the said frame and adapted each to underlie a middle leaf and one of said side leaves, to support the latter reliably in position.

In testimony whereof, we affix our signatures, in the presence of two witnesses.

ANDREW H. STONE.
ERNEST O. BROSTROM.

Witnesses:
FRANK R. GLONE,
G. Y. THORPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."