No. 786,732. PATENTED APR. 4, 1905.

J. A. CRANDALL.

FOLDING TABLE.

APPLICATION FILED JUNE 29, 1904.

2 SHEETS—SHEET 1.

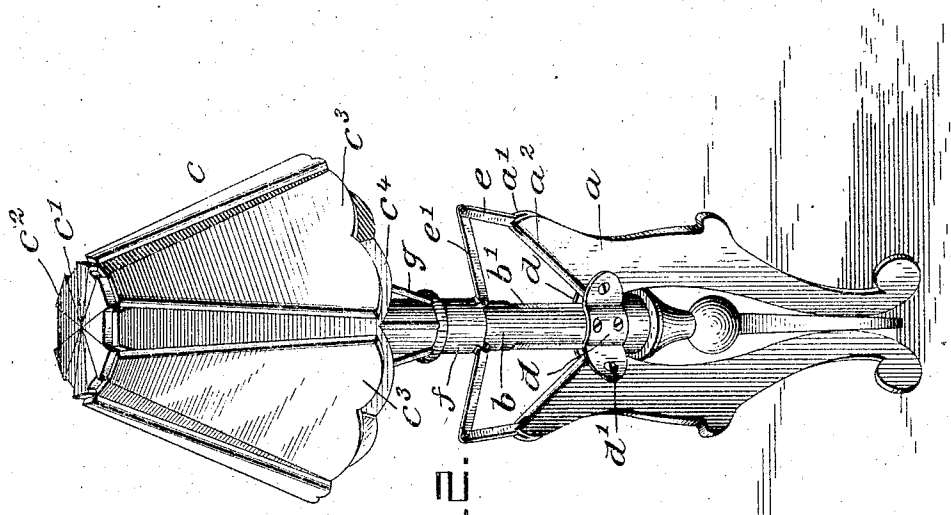


FIG. 2.

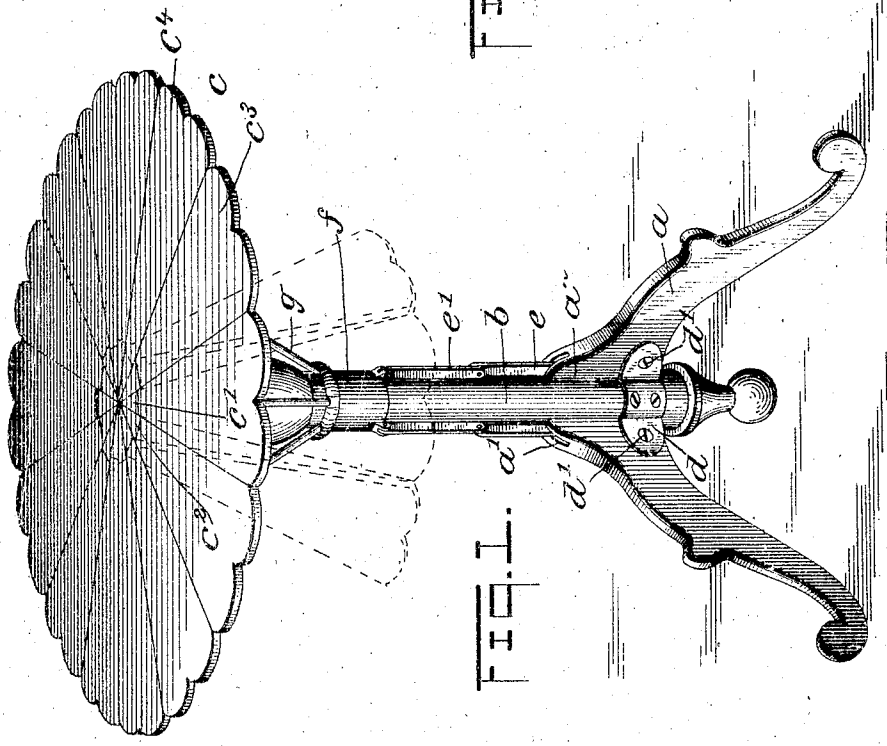


FIG. 1.

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2 SHEETS—SHEET 2.

FIG. 5.

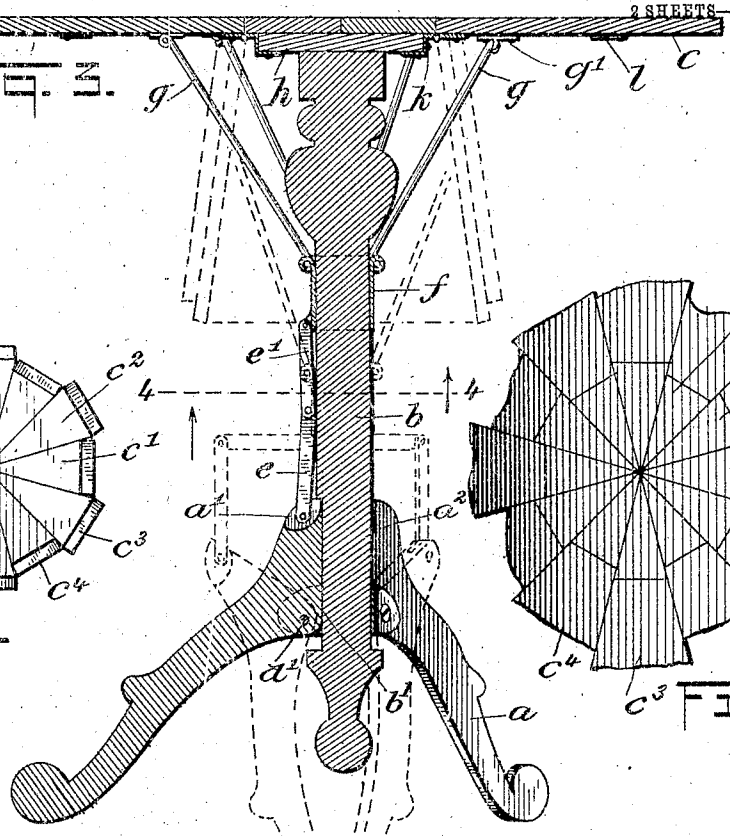
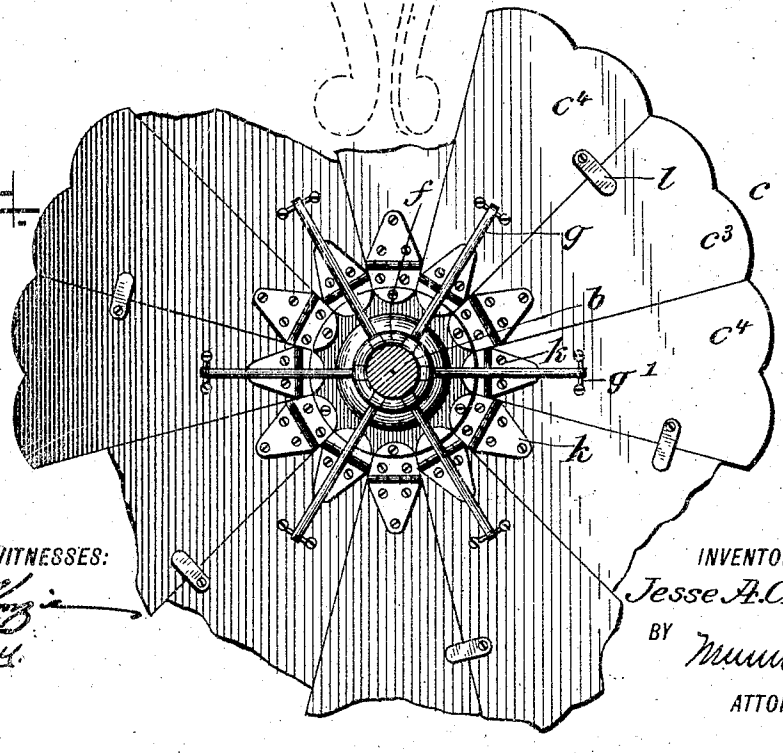


FIG. 6.

FIG. 5.

FIG. 4.



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UNITED STATES PATENT OFFICE.

JESSE ARMOUR CRANDALL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO FRANK PIERCE BRIGGS, OF NEW YORK, N. Y.

FOLDING TABLE.

SPECIFICATION forming part of Letters Patent No. 786,732, dated April 4, 1905.

Application filed June 29, 1904. Serial No. 214,612.

To all whom it may concern:

Be it known that I, JESSE ARMOUR CRANDALL, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Folding Table, of which the following is a full, clear, and exact description.

My invention relates to a table which is capable of being folded up into small compass for transportation and other purposes.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a preferred embodiment of my invention, showing the parts in extended position ready for use. Fig. 2 is a similar perspective view of the same, showing the parts folded up in a position convenient for transportation or packing away. Fig. 3 is a central sectional view of the same. Fig. 4 is a sectional view on the line 4 4 of Fig. 3, the table being shown in an inverted position. Fig. 5 is a plan view of the top of the table, showing the leaves thereof in contracted or folded position; and Fig. 6 is a similar view showing the leaves in raised or extended position, the ends thereof being broken away.

In the drawings, a represents a series of legs for supporting the device. b represents a standard, and c in a general way represents the top of the table. The legs are pivotally secured to the standard by means of cleats d and pivotal connections d'. The upper parts of the legs are provided with projections a^2, which are adapted to rest against the standard and preferably enter depressions b' therein in such a manner as to form a brace for the standard when in the position shown in Fig. 1. When desired, the legs may be swung backwardly on their pivots to take up less room, as shown in Fig. 2. The upper part of each leg is also provided with a grooved or cut-away portion a', in which the end of a link e is pivotally attached to the leg. A second link e' is pivotally attached to the first link and also to a sliding collar f, mounted on the standard. A series of links g are pivotally attached to the upper part of the collar f and to certain leaves of the table on the cleats g', as will be explained hereinafter.

The top of the standard b is preferably provided with a flat plate h, which supports the center piece of the table and to which the several leaves of the table are pivotally attached by means of hinges k or any equivalent device. This center piece is preferably made up of a series of triangular blocks, (represented in the drawings by c' and c^2.) It will be noticed that these triangular blocks are all shown as meeting at a common center and their edges extending outwardly therefrom on radial lines. The blocks c' are shorter than the blocks c^2, the difference between them being equal to or greater than the thickness of the leaves c^3 and c^4. It will be obvious that if the leaves are to extend outwardly and form a complete circle they must also be of different lengths, those designated by c^3 being shorter than those designated by c^4 on account of the different lengths of the sections c' and c^2 of the center piece. While it would be possible to form the center piece of a single piece of wood or other material, when it is made of wood it is more practical to form it in the manner illustrated to provide for the difficulties which wouldbe involved in attaching the hinges to the wood if the grain all ran in one direction. The adjacent edges of the leaves meet on radial lines, which lines coincide with the lines formed between the triangular sections of the center piece. It will be obvious that any number of leaves may be employed; but on account of certain peculiarities of the invention it will generally be advisable to have an even number of leaves. It will be observed upon reference especially to Fig. 4 that the links g are not connected to all of the leaves, but to only half of them—that is, to the alternate ones—and that those to which the links g are not connected are supported from the alternate leaves by means of small blocks or projections l, fastened to the under side of the leaves c^4. I have illustrated this construction; but it would be possible to operate the device without connecting every al-

ternate leaf with the links *g* and by connecting them up in some other relation—as, for example, by connecting every fourth leaf to the links *g* and supporting a leaf on each side thereof by means of projections similar to those shown at *l*.

The operation will now be described. Supposing the parts to be in the position shown in Fig. 1, it will be obvious that the links *e* and *e'* are so positioned as to make the pivotal joint between the two come on a line inside of a straight line drawn between the points at which the two outer ends of these links are pivoted one to the leg and the other to the sliding collar. This is more clearly shown in Fig. 3. From this construction it will be seen that pressure applied to the leaves connected with the links *g*, or, in fact, to any of the leaves, will be transmitted downwardly through the links *g* and collar *f* in such a manner as to force the pivotal connection between the two links *e* and *e'* inwardly against the standard *b*, and thereby cause the top to be all the more firmly held in position. This is a very important feature of my invention; but it will be obvious that it may be carried out in other ways than the one illustrated in the drawings. When it is desired to fold up the table, the legs are swung upon their pivots to the position shown in Fig. 2, and the collar *f* is drawn downwardly. This will cause the links *g* to swing the leaves c^4 downwardly upon their pivots or hinges to the position shown in Fig. 2 and in dotted lines in Figs. 1 and 3. It will be obvious, however, that there is no force except gravity acting to swing the sections c^3 downwardly in the same manner. The supports *l* for these sections being withdrawn, they will naturally fall down in the position illustrated in the figures mentioned; but if this does not occur, through the sticking of any of the hinges, it may be easily accomplished by hand. At this point it will be well to observe a very important feature of my invention, which consists in constructing the sections c^2 of the center piece so as to project a distance beyond the ends of the sections *c'* equal to or greater than the thickness of the table-leaves. If this were not done, the parts could not fold up in the manner clearly shown in Fig. 2, because the leaves being wider at their outer ends than at their inner ends would not be permitted to swing downwardly, where the outer diameter of the whole table-top must decrease as the leaves descend. By the construction herein described or any equivalent construction the leaves will be permitted to fold up into very small compass, and the whole table will then take up a very small amount of room.

The usefulness of the device will be apparent.

While I have illustrated a particular embodiment of the invention, it will be obvious that many modifications may be made therein without departing from the spirit of the invention, and I do not wish to be limited to the exact constructions shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A folding table comprising a standard, legs pivoted thereto, an even number of solid inflexible leaves pivotally connected with said standard, and means for automatically swinging each alternate leaf when the legs are swung on their pivots and leaving the other leaves free to swing in the same direction.

2. A folding table comprising a standard, legs movably connected thereto, an even number of leaves connected with the standard, and means for automatically swinging each alternate leaf toward the legs when the legs are moved in one direction and leaving the other leaves free to move in the same direction by gravity.

3. A folding table comprising a standard, legs pivoted thereto, an even number of leaves pivotally connected with said standard, means for automatically swinging each alternate leaf when the legs are swung on their pivots, and means on said alternate leaves for swinging the other leaves in one direction.

4. In a table, the combination of a standard, legs pivoted thereto, leaves pivotally connected with the standard, and connections between said legs and leaves comprising a link pivoted to each leg, links pivoted to certain of the leaves, and a toggle-joint connecting each of the first-mentioned links with the last-mentioned links.

5. In a table the combination of a standard, legs pivoted thereto, leaves pivotally connected to the standard, and connections between said legs and leaves comprising a link pivoted to each leg, links pivoted to certain of the leaves, a collar slidably mounted on the standard, and connected with the last-mentioned links, and a third series of links connecting the collar with the links pivoted to the legs.

6. In a table, the combination of a standard, legs pivoted thereto, leaves pivotally connected with the standard, and means for automatically swinging said leaves when the legs are swung on their pivots, comprising a pair of links pivotally attached together, one of said links being pivoted to a leg and the other connected to the leaves by means including a pivotal connection, the point at which one link is pivoted to the leg being farther from the center of the standard than that at which the other link of the pair is pivotally connected to the leaves.

7. In a table, the combination of a standard, legs pivoted thereto, leaves pivotally connected with the standard, and means for automatically swinging the leaves upon the operation of the legs on their pivots; said means comprising a pair of links pivotally attached together, one of said links being pivoted to a leg

and the other pivotally connected with a leaf, said links being adapted to be forced inwardly toward the standard at the point at which they are connected together, so that said point will be inside of a straight line drawn between the two points at which the outer ends of said links are pivoted.

8. In a table, the combination of a standard, legs connected thereto, leaves connected with the standard, and means for automatically swinging said leaves when the legs are moved; said means comprising a pair of links pivotally attached together, one of said links being attached to a leg and the other connected to the leaves, the point at which one link is attached to the leg being farther from the center of the standard than that at which the other link of the same pair is connected to the leaves.

9. A folding table, comprising solid inflexible leaves the opposite edges of which abut against those of the adjacent leaves throughout their length when the leaves are in open position, and a center piece to which the leaves are pivotally attached, said center piece and leaves constituting the entire top of the table.

10. A folding table, comprising leaves having abutting edges throughout their length, a center piece to which the leaves are pivotally attached, and means for permitting the leaves to swing away from the plane of the center piece.

11. A circular folding table, comprising leaves having radial abutting edges throughout their length, a center piece to which the leaves are pivotally attached, and means for permitting the leaves to swing away from the plane of the center piece.

12. A circular folding table, comprising leaves having radial abutting edges, a center piece to which the leaves are pivotally attached, and means for permitting the leaves to swing away from the plane of the center piece and to assume positions where they will all make equal angles with the top surface thereof.

13. A folding table having a top substantially of circular form, comprising a center piece made up of triangular sections, and an equal number of leaves each pivotally attached to one of said triangular sections.

14. An article of manufacture having a top of substantially circular form, comprising a center piece made up of triangular sections, every alternate one of said sections projecting beyond the other sections a distance as great as the thickness of the said leaves, and a plurality of leaves each hinged to the base of one of said triangular sections.

15. An article of manufacture, comprising a center piece having alternate projections and indentations in its periphery, and a plurality of leaves each hinged to the center piece on a projection or at an indentation, said leaves hinged on the projection being shorter than the others, and the edges of said leaves abutting against each other throughout their length when they are in the plane of the center piece.

16. An article of manufacture, comprising a circular center piece having alternate projections and indentations in its circumference, a plurality of leaves extending radially from the center piece each forming a section of a circular top and each hinged to the center piece on a projection or at an indentation, the said leaves hinged on the projection being shorter than the others by a distance equal to the thickness of the leaves, and said projections extending the same distance beyond the indentations.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JESSE ARMOUR CRANDALL.

Witnesses:

JNO. M. RITTER,

A. E. FAY.