C. W. COFFIN.

FOLDING TABLE.

APPLICATION FILED MAR. 25, 1913.

1,090,451.

Patented Mar. 17, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

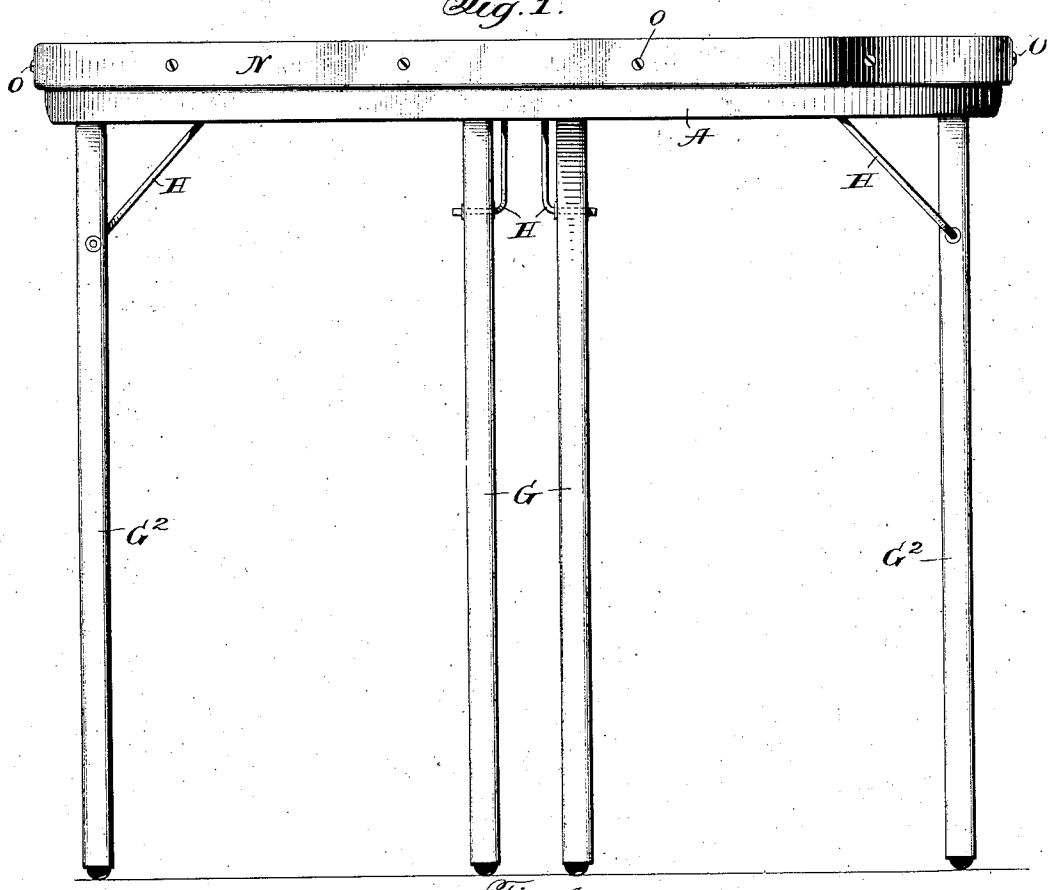


Fig. 4.

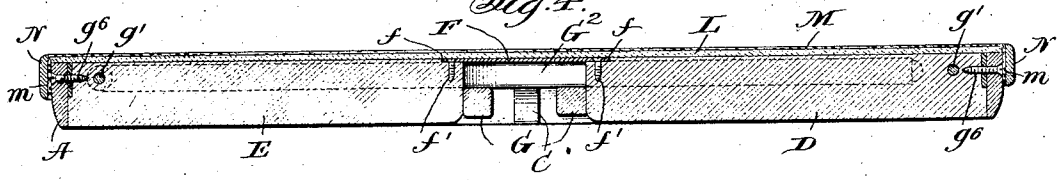
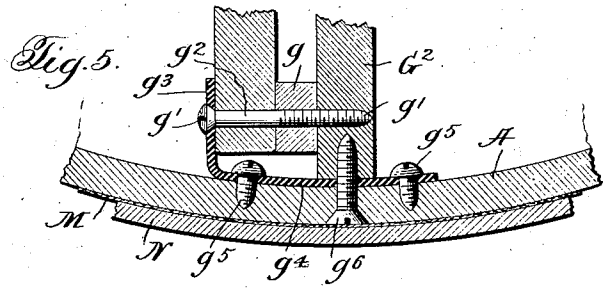


Fig. 5.



Witnesses:

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2 SHEETS—SHEET 2.

Fig. 2.

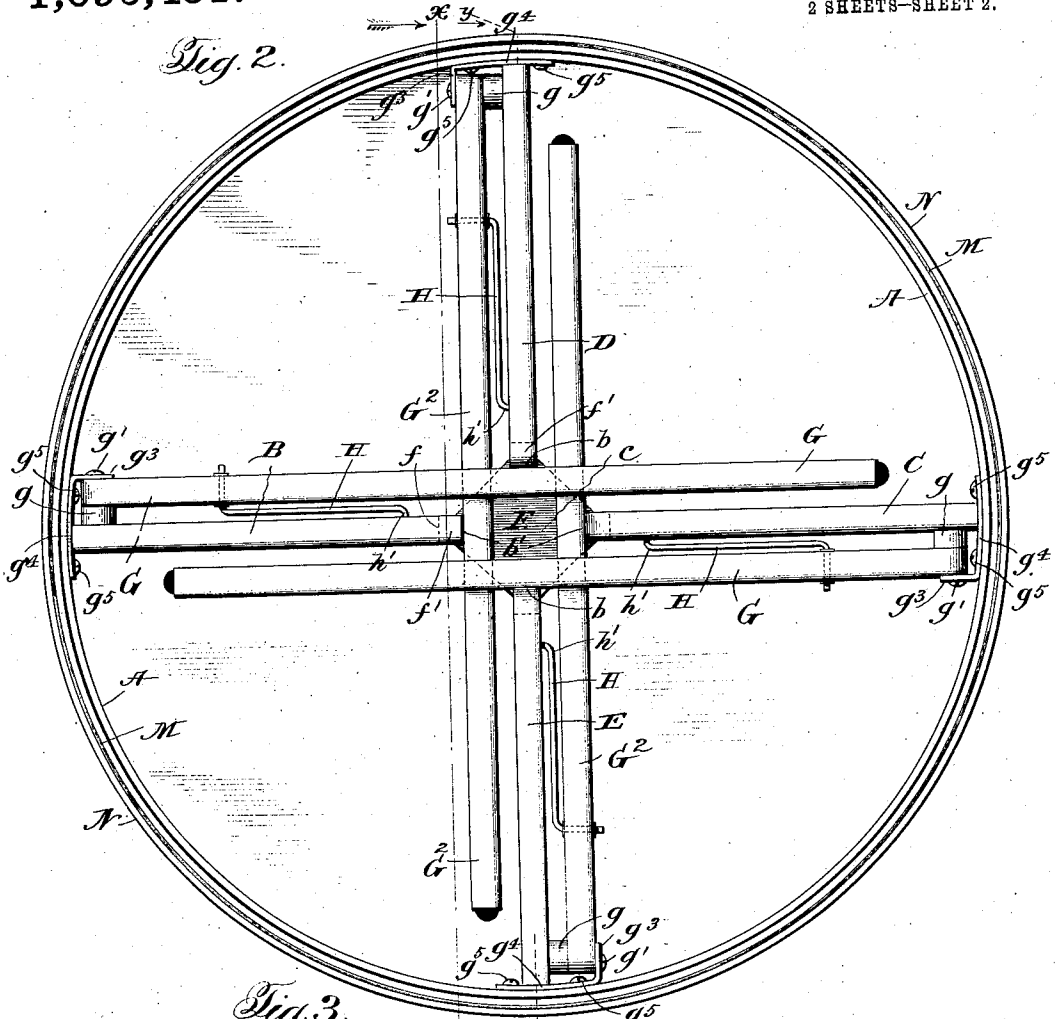
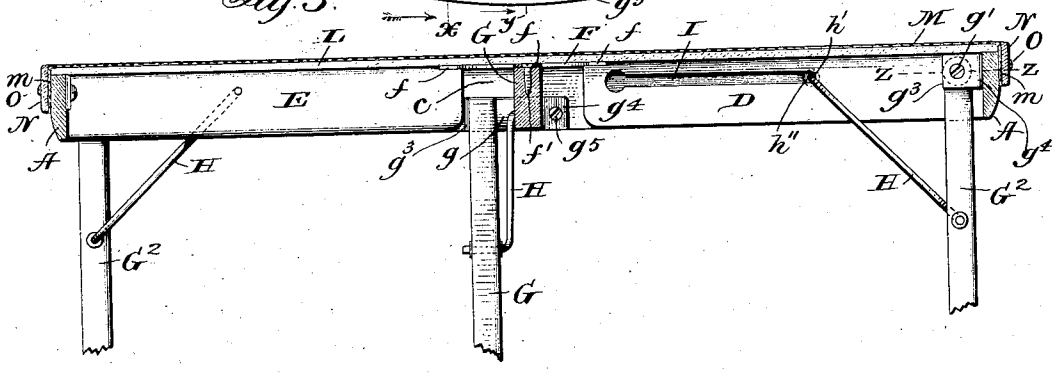


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FOLDING TABLE.

1,090,451. Specification of Letters Patent. Patented Mar. 17, 1914.

Application filed March 25, 1913. Serial No. 756,774.

To all whom it may concern:

Be it known that I, CHARLES W. COFFIN, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Folding Tables, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to tables, and has for its object the provision of an improved portable, light, folding table, particularly useful as a card table, though, of course, capable of many other uses expected of a table of the character stated.

A characteristic of the present invention is embodied in the improved construction and formation of a table frame or skeleton, complete in itself, and independently of the covering therefor, comprising a surrounding or marginal portion and braces connected thereto and through other means, spanning the space therewithin, said frame carrying and bracing foldable legs adapted to be closed within said space between the upper and lower edges of the marginal or surrounding portion of the frame; and said frame rendering it possible to employ a thin light material, such as paper board, as a covering for the frame, which, when laid upon and secured to the frame, will be rendered sufficiently rigid and strong to constitute an efficient table top, adequately reinforced and supported not only around the margin thereof but at the central portion of the same.

Other features of the invention reside in an improved manner of arranging and securing within the surrounding or marginal portion of the frame the intermediate braces therefor on which the covering is adapted to be laid; a simple and effective manner of pivoting the foldable legs on the frame and of bracing the same therefrom when open; an arrangement of the foldable legs relative to the frame, enabling the folding of the legs into compact form and facilitating the use of a frame and top of relatively small size while of sufficient diameter to receive the folded legs therewithin; and simple durable means for fastening the legs when folded into the frame against accidental opening.

All of the foregoing together with additional advantageous details and arrangements of parts of the preferred embodiment of my invention will be clear from the specific description hereinafter contained, when read in connection with the accompanying drawings forming part thereof, wherein said embodiment of the invention is illustrated for the purpose of facilitating a full understanding of the present improvements.

In the drawings, Figure 1 is an edge view of the complete table, Fig. 2 is a bottom view of the table in its folded condition, Fig. 3 is a vertical sectional view through the upper portion of the table, with legs extended, on line x—x of Fig. 2, looking in the direction of the arrows, Fig. 4 is a sectional view on the line y—y of Fig. 2 looking in the direction of the arrows, and Fig. 5 is a detail sectional view of the central portion of the table on line 8—8 of Fig. 3.

Referring now more specifically to the drawings, and in connection with which like reference letters will refer to the same parts in the several views, A represents the surrounding or marginal portion of an open frame or skeleton, the same being shown of circular formation, although it may be of other shape, as desired, and of suitable thickness or height to accommodate folding legs as will hereinafter appear. Bracing the marginal or surrounding portion A of the frame are four bars in alined pairs B and C, and D and E, arranged in the space within the surrounding portion A of the frame and each secured at its outer end to the latter. The bars D and E are arranged at right angles to the bars B and C, and all of said bars B, C, D and E terminate at points near the center of the frame so as to be spaced apart at the inner ends thereof by the central unobstructed space c. The frame construction as thus far described is preferably of a light wood, as are also the legs to be presently defined, and the upper surfaces of the bars B, C, D and E are preferably flush with the upper surface of the surrounding member A of the frame. A centrally located thin horizontal flat metal plate F, conveniently square in outline, is seated with said ears overlying the upper surfaces of the inner ends of the bars B, C, D and E and having apertured ears f at its corners, and is fastened to said bars by screws or the like f', to connect, brace and support the inner ends of all of the bars.

The plate, as will be clear, constitutes a firm middle support for the table top, while aiding in the accomplishment of other advantageous functions present in my table, as will later appear.

G and G^2 represent opposite pairs of folding legs, the same being mounted in the following manner, to wit: Each of the legs at its upper end adjoins a bearing or spacing block g, each secured to the side of the adjacent bar B, C, D or E, as the case may be, through the medium of a screw g' threaded through the block and into the bar. The screw has a smooth or unthreaded outer shank portion g^2 passing through the leg and constituting a pivot bearing for the leg. The outer bearing for the leg, separated from and in opposition to the spacing block or bearing g is formed by the offset or shorter leg g^3 of an approximately L-shaped metallic bracket g^4, the screw g' passing freely through the offset g^3 and having its head bear against the outer surface of the latter. The longer leg or base of the bracket is formed in keeping with the interior formation of the frame to which the same is attached, in the present instance slightly curved to closely lie against the inner surface of the circular frame member A, to which the base of the bracket is securely fastened at three points by means of the screws g^5 engaging the opposite projecting end portions of the base g^4 at the correspondingly opposite sides of the bar (B, C, D or E), and an intermediate screw g^6 passing from the outside through the frame member A through the base of the bracket g^4, and into the end of the said frame bar,—it being observed that the screws g^5 are passed from the inside through the base g^4 of the bracket outwardly into the frame member A.

By the foregoing construction of mounting for the legs, it will be observed that the frame members are firmly and rigidly united and strengthened, and a firm, lasting bearing for the legs afforded.

The reinforcing frame bars B, C, D and E being of uniform thickness,—approximately that of the surrounding frame member A,—it will be appreciated that to enable the four legs to fold in the space on the interior of the frame and be confined between the planes of the upper and lower surfaces of the frame, provision must be made to enable one pair of the legs to fold over the opposite pair. This result is accomplished by securing the L-shaped metal brackets and legs of one pair (G) near the upper edge of the surrounding frame member A, and the supporting brackets for the other pair of legs (G^2) near the lower edge of the said frame member A. This enables the folding of the legs G in a parallel relation against the table top with the legs G^2 folded into a similar parallel relation at right angles to the legs G and immediately below the latter, as clearly illustrated.

All of the legs are provided with braces H, the same being conveniently formed of spring metal with an offset end h' carrying a washer h'' adapted to work in a confining slot I in the adjacent bars B, C, D and E. The slots in a pair of these bars are arranged near the upper edge thereof, the slots of the other pair being arranged near the lower edge of the same, in keeping with the relative positioning of the metal brackets and legs carried thereby, as just previously described. By this arrangement, the spring braces H are each interposed between the leg which carries the same and one of the bars,—the spacing blocks g causing the proper separation of the legs from the bars,—and are adapted to be sprung when the legs are folded so that a sufficient frictional engagement will be created between the sides of the legs and the inner ends b of the bars B, C, D and E, this frictional engagement being accomplished by a required slight deflection of the legs to enable them to enter the space formed at the center of the frame between said ends of the bars. As is obvious, the legs enter and lie within said central space c left beneath the plate F and between the said ends b of the bars.

All of the instrumentalities to which I have alluded are confined, in the closed condition of the table, in the space within the surrounding member A of the frame and between the planes of the upper and lower edges of said surrounding member.

The device as thus far described is a rigid complete structure abundantly capable of use for the purposes for which a support of this kind is designed, and all that remains to be done is to provide the same with a covering capable of coöperating with the frame to furnish the table top. I desire to accomplish this result in a simple inexpensive manner and by the utilization of a material of light character,—lending to the portability of the table,—and preferably sufficiently thin to add no material thickness to the table frame as previously defined. By reason of the frame construction, I am enabled to use a paper or similar covering L (even of a character in itself incapable of constituting a table top because of the frailty thereof) which when laid upon the upper edge of the surrounding frame member A and upon the flush upper surfaces of the bars B, C, D and E, and the central metal plate F, will be abundantly supported and stiffened around the edge and at the central portion thereof, to constitute a rigid durable table top. Preferably, the paper covering is tacked to the frame members, and a felt or other smooth or decorative facing M is applied thereover and secured at

its depending edge *m* between the frame member A and a molding strip N, in the present instance in the nature of a ring or hoop, the molding, facing material and frame member A being fastened together by screws or similar devices O. The upper edge of the molding N overlaps the edge of the paper covering L to protect such edge from breaking or tearing, which might result were the edge of the paper entirely unprotected at this point, although I prefer that the felt or similar facing M shall occupy a position (see Figs. 1, 2 and 4) slightly raised with reference to the molding N, so that the molding cannot offer any obstruction at the edge of the table, as for example, in withdrawing cards from the table over said edge,—in other words, the whole of the effective or operating surface of the table may be said to be a smooth continuous surface including the surrounding marginal edge of the top.

While I have herein disclosed a specific embodiment of the invention, it will be apparent to persons skilled in the art that the invention is capable of embodiment in other forms and devices differing in detail and arrangement from that shown, as may be in keeping with the hereto appended claims. In these claims, it will be observed that I do not claim the improved top *per se* of the table disclosed herein, in view of the fact that it has been held that such subject matter should more properly be included in a divisional application.

Having thus described the invention, what is claimed is:

1. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars in the space within the surrounding member terminating short of the center of said space, to leave an unobstructed central space defined by the ends of said bars, means spanning the space between the inner ends of the bars and connected thereto, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame.

2. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars in the space within the surrounding member terminating short of the center of said space, a thin metal plate spanning the space between the inner ends of the bars and connected thereto, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space between the inner ends of the bars.

3. An article of manufacture of the character described consisting of a light, portable, folding table comprising a skeleton or frame including a surrounding member, reinforcing bars extending inwardly from said surrounding members, bars arranged at right angles to said first mentioned bars, the reinforcing bars being separated at their inner ends, to provide an unobstructed central space defined by said ends, a covering on the frame constituting therewith a suitable top, legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame, said legs being arranged in pairs adapted to fold at right angles to each other, a pair parallel to the first mentioned bars and within the space between the inner ends of the other bars and the other pair parallel to said other bars and under the first mentioned pair of legs, and means for causing a holding engagement between the ends of the bars and the legs adjoining the same.

4. An article of manufacture of the character described consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars extending inwardly from different angles and separated at their inner ends, a thin metal plate spanning the space between the inner ends of the bars connected thereto, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame and between the ends of the separated reinforcing bars.

5. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars within said surrounding member, a covering on the frame constituting therewith a suitable top, pivot members secured to the surrounding member of the frame at points adjacent to the outer ends of the bars, and legs pivotally mounted between said pivot members and bars adapted to fold into the space within the surrounding member of the frame, said pivot members comprising brackets secured to the surrounding member of the frame having an offset portion constituting a support for the outer end of the pivot of the leg, the base portion of the bracket being interposed between said surrounding member and the end of the reinforcing bar with the end of the bar directly against said base, and secured to both said member and bar.

6. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars within said surrounding member, a covering on the frame constituting

therewith a suitable top, pivot members secured to the surrounding member of the frame at points adjacent to the outer ends of the bars, and legs pivotally mounted on said pivot members and bars adapted to fold into the space within the surrounding member of the frame, said pivot members comprising brackets secured to the surrounding member of the frame having an offset portion constituting a support for the outer end of the pivot of the leg, the base portion of the bracket being interposed between said surrounding member and the end of the reinforcing bar, and extending beyond the opposite sides of the bar, and means for securing the same at the opposite sides of the bar to the surrounding member.

7. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars within said surrounding member, a covering on the frame constituting therewith a suitable top, pivot members secured to the surrounding member of the frame at points adjacent to the outer ends of the bars, and legs pivotally mounted on said pivot members and bars adapted to fold into the space within the surrounding member of the frame, said pivot members comprising brackets secured to the surrounding member of the frame having an offset portion constituting a support for the outer end of the pivot of the leg, the base portion of the bracket being interposed between said surrounding member and the end of the reinforcing bar, and extending beyond the opposite sides of the bar, means for securing the same at the opposite sides of the bar to the surrounding member, and means for securing the bracket at an intermediate point to the end of the reinforcing bar.

8. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars extending to near the center of the space within said surrounding member, and other similar reinforcing bars arranged at an angle to said first mentioned bars, a plate bridging the space between the inner ends of said bars, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame.

9. An article of manufacture of the character described, consisting of a light, portable, folding table comprising a skeleton or frame including a surrounding member, reinforcing bars extending to near the center of the space within said surrounding member, the inner ends of said bars being separated to leave a space therebetween, a plate bridging the space between said inner ends, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame and between the ends of the separated reinforcing bars.

10. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars extending to near the center of the space within said surrounding member, and other similar reinforcing bars arranged at an angle to said first mentioned bars, a plate bridging the space between the inner ends of said bars, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame, said legs being arranged in pairs adapted to fold at right angles to each other, each pair parallel to a pair of the cross bars and within the space between the inner ends of the other cross bars.

11. An article of manufacture of the character described consisting of a light, portable, folding table comprising a skeleton or frame including a surrounding member, reinforcing bars extending to near the center of the space within said surrounding member, the inner ends of said bars being separated to leave a space therebetween, a plate bridging the space between said inner ends, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame, and within the space between the inner ends of the bars.

12. An article of manufacture of the character described, consisting of a light, portable, folding table, comprising a skeleton or frame including a surrounding member, reinforcing bars extending to near the center of the space within said surrounding member, and other similar reinforcing bars arranged at an angle to said first mentioned bars, a plate bridging the space between the inner ends of said bars, a covering on the frame constituting therewith a suitable top, and legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame, said legs being arranged in pairs adapted to fold at right angles to each other, each pair parallel to a pair of the cross bars and within the space between the inner ends of the other cross bars, the ends of the bars and legs being arranged to cause a holding engagement between said ends and the legs adjoining the same.

13. An article of manufacture of the character described consisting of a light, portable, folding table comprising a skeleton or

frame including a surrounding member, reinforcing bars extending inwardly from said surrounding member, bars arranged at right angles to said first mentioned bars, the reinforcing bars being separated at their inner ends, a thin metal plate bridging the space between said inner ends, a covering on the frame constituting therewith a suitable top, legs pivotally mounted on the frame and foldable into the space within the surrounding member of the frame, said legs being arranged in pairs adapted to fold at right angles to each other, a pair parallel to the first mentioned bars and within the space between the inner ends of the other bars and the other pair parallel to said other bars and under the first mentioned pair of legs, and means for causing a folding engagement between the ends of the bars and the legs adjoining the same.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. COFFIN.

Witnesses:
J. F. Cox,
H. H. Russell.