

Oct. 6, 1931.

O. LANDAW

1,826,618

TABLE TOP

Filed March 25, 1929

2 Sheets-Sheet 1

Fig. 1.

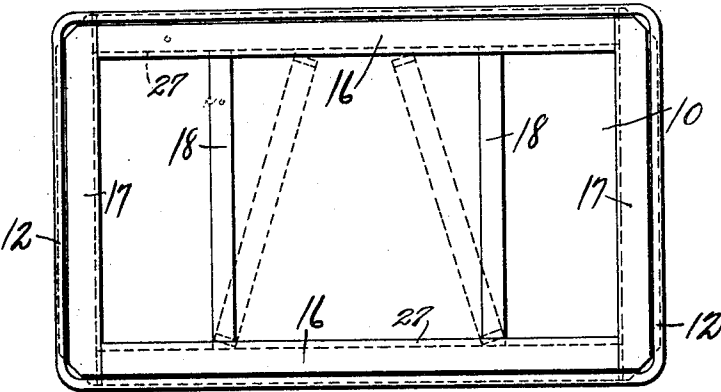


Fig. 2.

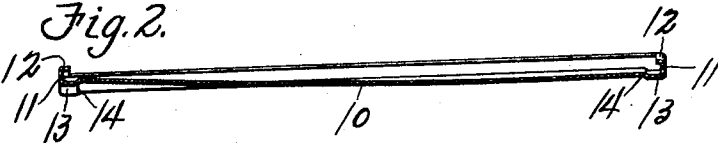
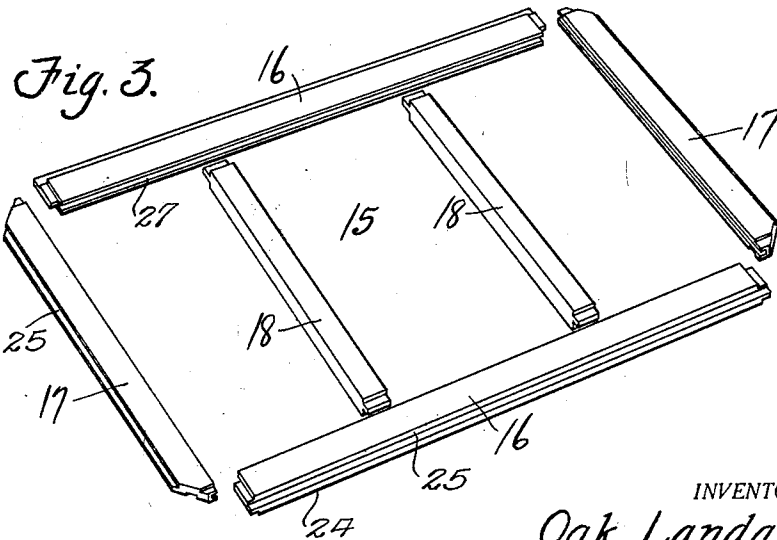


Fig. 3.



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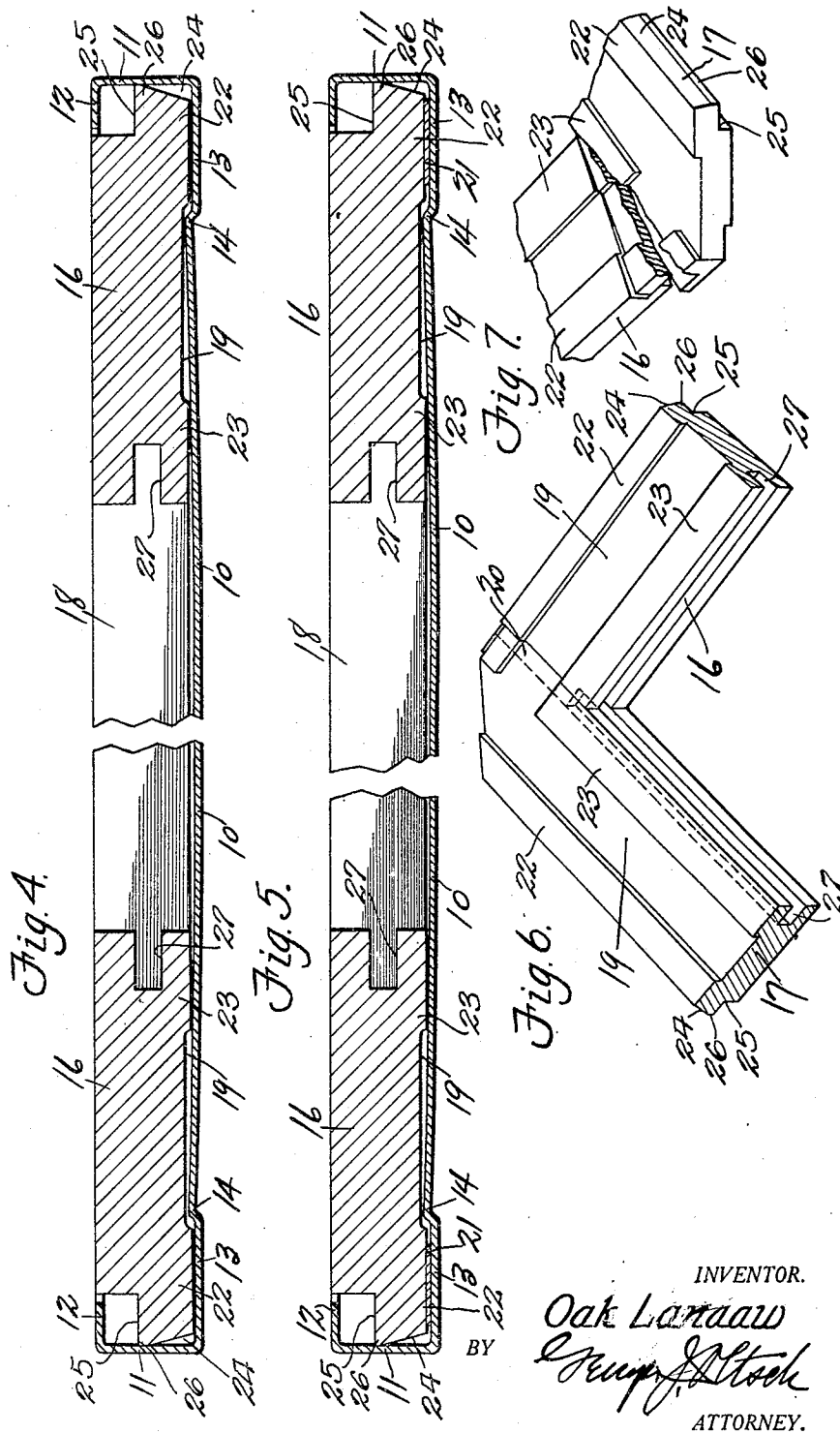
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TABLE TOP

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2 Sheets-Sheet 2



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TABLE TOP

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The invention relates to table tops, and particularly to stamped sheet metal table tops and the like and means for permanently supporting the same, and is an improvement over the construction and means of assembling supporting frames for table tops as shown in Patents #1,464,910, #1,607,542, and #1,629,799 granted to me, and is directed to improvements in the construction of a frame for stretching and holding the metal table top in plane extended position by removing any buckling and distortion caused by the stamping operation or in the heat enamelling thereof, said frame parts being constructed and cooperating in a manner to prevent breaking of the frame itself in its application to the metal top.

A further object is to provide a device of this character in which the frame members are formed to compensate for irregularities in the surface of the metal top so that no buckling of the frame members to cause splitting or breaking thereof will result in the application of spreading force to the frame.

A further object is to provide a device of this character in which the spreading force of the transverse frame spreading braces is applied to and through the frame members in the plane of the supporting frame to compensate for and remove distortion from the table top, said frame being constructed to prevent buckling of the frame members under the application of the spreading force, which buckling tends to cause splitting of the frame members at the jointure thereof.

A further object is to provide a table top supporting frame of this character in which the frame members are constructed to bridge the shoulder forming the marginal ridge of the table top whereby to prevent the inner edges of the frame members from being forced sidewise away from the table top.

A further object is to provide a table top supporting frame of this character constructed to have a supporting contact with the bottom of the table frame on the opposite sides of the shoulder forming the marginal ridge of the table frame.

With the above and other objects in view,

the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawings, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:

Figure 1 is a bottom plan view of the table top with the supporting frame applied thereto.

Figure 2 is a longitudinal sectional view of the metal table top showing the manner in which the unsupported sheet metal table top buckles.

Figure 3 is a perspective view of the members comprising the supporting frame.

Figure 4 is a transverse sectional view of the table top in inverted or assembling position showing the frame members in cross section.

Figure 5 is a transverse sectional view of the table top in inverted or assembling position showing a modified form of the frame member in cross section.

Figure 6 is a fragmentary perspective view of a corner of the supporting frame, showing the channel formed therein to receive the inwardly directed shoulder forming the marginal ridge of the metal table top.

Figure 7 is a fragmentary perspective view of a corner of the supporting frame, showing the manner in which frames of the customary construction are broken due to buckling or other forces acting at an angle to the spreading force of the transverse brace members.

Referring to the drawings, the numeral 10 designates a stamped sheet metal table top having depending sides and ends 11 and inwardly extending flanges 12, said sides and ends 11 and flanges 12 forming a channel extending about the outer edge of the table top. A marginal off-set portion 13 extends around the margin of the metal table top and is formed by an inwardly directed ridge 14 swaged or stamped in the metal table top. A frame 15 carries the metal table top, and is comprised of the side members 16, the end members 17, and the transverse spreading

brace members 18, all having tongue and groove connections with each other; the side members 16 and the end members 17 fitting into the marginal channel formed by the flanges 11 and 12. In the preferred construction, as shown in Figure 4, the top contacting faces of the side and end members 16 and 17 taper inwardly, and have a longitudinally extending groove 19 centrally formed there-
 5 in between outer and inner top contacting portions 22 and 23 which engage the table top at the opposite sides of ridge 14 which is received in groove 19 of said members. The corners of the frame are mitered so that all of the spreading force is applied against the
 10 sides of the metal table top and none at the corners. The outer edges of the side and end members are formed with faces 24 extending angularly outwardly from the top contacting faces thereof to a point slightly beyond the central plane of said members, and terminate in cut-away portion 25, whereby a
 20 ridge 26 is formed on the outer edge of each member which extends longitudinally thereof and provides the sole portion of the frame members engaging flanges 11 of the top. The ridge 26 of each frame member, being spaced outwardly of a projection of the center line of the groove 27 formed in the inner edge of the member, as clearly shown in Figure 3, acts
 30 to force and hold the inner top contacting portion 23 of the member in engagement with the table top when the frame is operatively extended by the spreading brace members 18, and thus prevents outward buckling and consequent breakage of the frame, and in effect produces a self-locking arrangement of the frame relative to the table top. The ridge
 35 26 applies spreading force to the flange 11 at a point as near to a projection of the center portion of the top within the ridges 14, as possible, to prevent distortion of flanges 11. As shown in Figure 6, the grooves 19 in the side and end members communicate with each
 45 other by means of a short groove perpendicular to the groove 19 and formed in the end of the end members 17, so that a groove extending continuously around the supporting frame in one face thereof is provided to receive the ridge 14 of the table top.

The grooves 19 and 20 extending continuously around the frame are adapted to bridge at all points the inwardly directed ridge 14 employed in forming the marginal off-set
 55 portion 13 in the metal table top. The portions 22 and 23 of the frame members on the opposite sides of the grooves 19 and 20 are adapted to have a bearing contact with the bottom side of the metal table top, the taper
 60 of said portions of the frame members permitting the outer portion 22 thereof to seat against the under side of the off-set portion 13 of the metal table top. In previous constructions the groove 19 was not employed, and as a result the shoulder 14 prevented the

frame members from having a bearing contact with both the marginal off-set portion 13 and the portion of the top just within the ridge 14 at the same time to properly support them, and caused the frame members to incline to the plane of the metal table top and frame, so that, upon the application of the spreading force in forcing the transverse brace members to place, the frame members would be given a sidewise or buckling thrust
 75 which tended to break or split the frame at the tongue and groove jointure of the frame members, as shown in Figure 7. However, with the instant construction, the ridge 14 being bridged, the frame members have a bearing contact with the bottom of the metal table top on both sides of the ridge 14 to properly support the same, and the spreading force applied by the brace members 18 is applied substantially in the plane of the metal
 85 table top and frame, and without any tendency toward buckling or sidewise movement of the frame member away from the top to break the tongue and groove joint.

In the modified construction shown in Figure 5, the frame member is not tapered as in the preferred construction, but a shim or filler portion 21 is secured to the outer portion of the frame member, or is inserted between the off-set portion 13 of the table top
 95 and the frame member in the assembly thereof, and the groove 19 bridging the ridge 14 is also provided, so that this construction also provides a bearing contact between the frame member and the under side of the table top
 100 at the opposite sides of the ridge 14 to properly support the metal table top and to insure the application of spreading force to the frame member substantially in the plane of the metal table top.

The invention having been set forth, what is claimed as new and useful is:

1. The combination with a sheet metal table top having a flanged rim and a downwardly directed ridge formed therein and
 110 spaced from the outer edges thereof, of a frame mounted in said flanged rim and comprising side bars and end bars, said side and end bars being longitudinally grooved whereby they may have bearing contact with said
 115 table top on opposite sides of said ridge.

2. The combination with a sheet metal table top having a flanged rim and a downwardly directed ridge formed therein and spaced from the outer edges thereof, of a
 120 frame mounted in said flanged rim and comprising side bars and end bars, said bars having longitudinal interconnected grooves formed in one face thereof adapted to receive said ridge whereby said bars may have a bearing
 125 contact with said table top on opposite sides of said ridge.

3. The combination with a sheet metal table top having a flanged rim and a downwardly directed ridge formed therein and
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spaced from the outer edges thereof, of a frame mounted in said flanged rim and comprising side bars and end bars, said bars tapering inwardly in transverse section and having a groove formed in the top contacting face thereof adapted to receive said ridge, said bars engaging the top at the opposite sides of said ridge.

4. The combination with a sheet metal table top having a flanged rim and a downwardly directed ridge formed therein and spaced from the outer edges thereof, of a frame mounted in said flanged rim and comprising side bars and end bars, said bars tapering transversely inwardly and having a longitudinal groove formed intermediate the top contacting face thereof to receive said ridge, the portions of said face opposite said grooves having a bearing contact with the top on the opposite sides of said ridge.

5. The combination with a sheet metal table top having a flanged rim, of a supporting frame mounted in said flange rim and comprising side bars and end bars, said bars each having a longitudinal ridge formed in the outer edge thereof and off-set from the center thereof away from the top contacting face thereof, said ridge providing substantially line contact between said bars and said flanged rim.

6. The combination with a sheet metal table top having a flanged rim, of a supporting frame mounted in said flanged rim and comprising side bars and end bars, said bars having their outer edges formed to provide a longitudinal ridge substantially centrally thereof and engaging said rim in a substantially line contact.

7. The combination with a sheet metal table top having a flanged rim and a downwardly directed ridge formed therein and spaced from the outer edges thereof, of a supporting frame mounted in said flanged rim and comprising side bars and end bars, said bars having interconnected longitudinal grooves formed in the top contacting face thereof to receive said ridge and having their outer edges formed to provide a longitudinal ridge substantially centrally thereof engaging said flanged rim in a substantially line contact.

8. The combination with a sheet metal table top having a flanged rim and a downwardly directed ridge formed therein and spaced from the outer edges thereof, of a supporting frame mounted in said flanged rim and comprising side bars and end bars, said bars tapering transversely inwardly and having the top contacting face thereof grooved to receive said ridge and to permit bearing contact of said bars with the top on the opposite sides of said ridge, the outer edges of said bars being formed to provide a longitudinal ridge substantially centrally

thereof engaging said flanged rim in a substantially line contact.

9. The combination with a sheet metal table top having a perpendicularly flanged rim, of a stretching frame mounted in said flanged rim and comprising side and end members subjected to outwardly directed stress, the outer edge of each frame member being provided with a longitudinally extending ridge having a substantially line engagement with said flanged rim and disposed below the central plane of the frame member whereby the inner side of the upper, top contacting face of each member is forced into engagement with said top upon the application of stress to said member to prevent buckling of the frame away from said top.

10. The combination with a sheet metal table top having a perpendicularly flanged rim and a downwardly directed ridge formed therein spaced from said rim to provide an off-set marginal top portion, of a top stretching frame mounted in said flanged rim and comprising side and end members subjected to outwardly directed stress, each of said members being grooved to receive said ridge and permit engagement thereof with said top at the opposite sides of said ridge, said members each having a longitudinal ridge formed in the outer edge thereof below the central plane thereof and engaging said flanged rim, said ridges forcing the inner sides of each member into bearing contact with the top on the inner side of said ridge upon the application of outward stress thereto whereby buckling of said frame away from said top is prevented.

In testimony whereof I affix my signature.
OAK LANDAW.

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