Aug. 10, 1926. 1,595,398

R. HOFFMAN

TABLE TOP

Filed April 6, 1922

FIG. 1

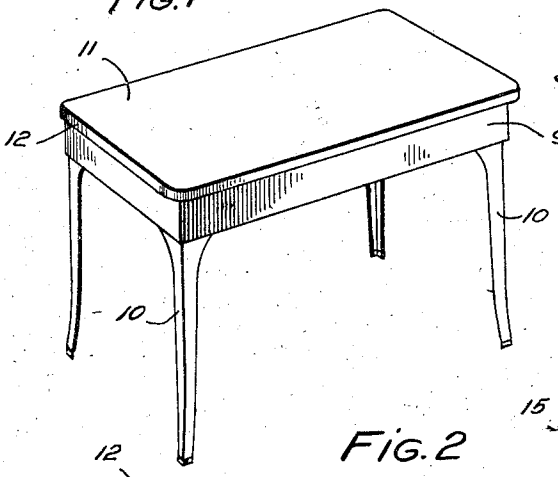


FIG. 6

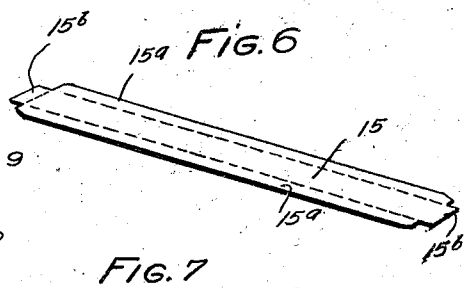


FIG. 7

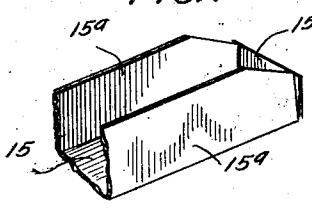


FIG. 8

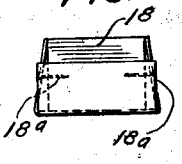


FIG. 2

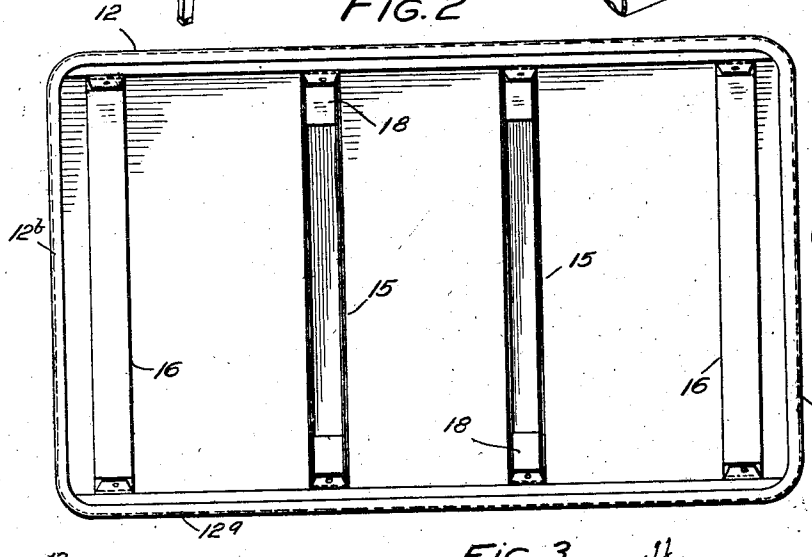


FIG. 5

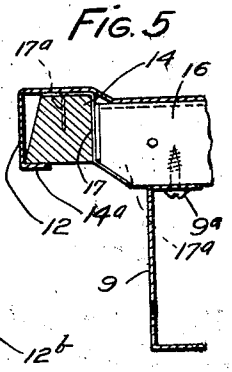


FIG. 3

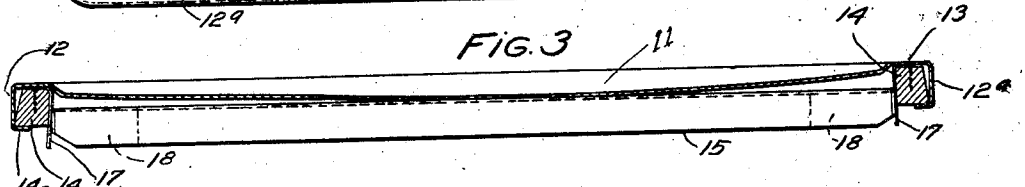


FIG. 4

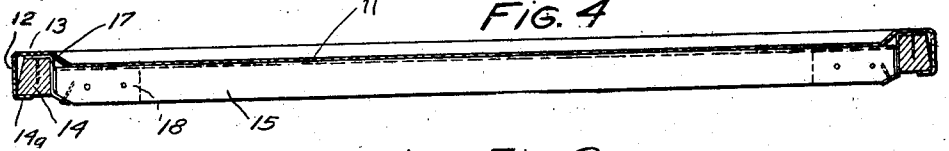
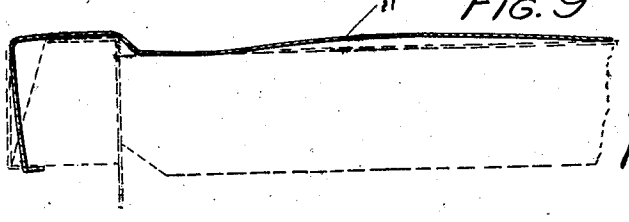


FIG. 9



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Attys

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UNITED STATES PATENT OFFICE.

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TABLE TOP.

Application filed April 6, 1922. Serial No. 549,993.

The invention has reference to table tops which are constructed of sheet metal and coated with porcelain enamel.

One of the difficulties encountered in the manufacture of efficient table tops of this character arises from the tendency of the metal to bow or buckle; and it is the aim of my invention to provide a means which is capable of effectually overcoming this objection, and which at the same time provides a reinforcing and supporting means for the top.

With this aim in view, the invention contemplates the use of a flexing and reinforcing means for the top comprising a pair of wedge-like members engaging the lower corners of the opposite hooked flanges of the table top and a plurality of stays forcibly entered between the members so as to move them outwardly, producing a lever-like action upon the flanges and the top which imparts thereto a tendency to flare or bulge inwardly at the center. However, the top firmly engages with the upper edges of the stays and is thus maintained in a substantially flat condition.

As a further object of the invention, I have aimed to overcome a difficulty which I have encountered in the production of an effective reinforcement of the type above referred to. Such difficulty arises from the difference in expansion and contraction of metal and wood under the same changes of temperature and the tendency of the stays when made of wood to permanently shrink under the various temperatures to which they are subjected in use; but the use of wood for these stays is desirable since it enables the top to be fastened in place upon the table base conveniently by means of screws entered into the strips. I have found, however, that even seasoned and kiln dried stays of wood are not wholly effective, and I therefore provide a metallic stay which is preferably of channel bar construction equipped with end pieces or fillers formed of wood whereby the top may be additionally secured to the table base.

In the accompanying drawings I have illustrated a single embodiment of the invention, but it will be understood that various changes in form, construction and arrangement of the parts may be made by those skilled in the art but without departing from the spirit and scope of the invention as expressed in the appended claims.

In the drawings, Figure 1 is a perspective view of a table equipped with my improved work table top. Fig. 2 is an underside plan view of the table illustrating the reinforcing means in operative relation to the table top. Fig. 3 is a transverse vertical sectional view through the table showing the reinforcing members partly engaging the wedge-like members contained within the downturned flanges of the table top. Fig. 4 is a view similar to Fig. 3 showing the reinforcing members as completely engaged. Fig. 5 is a fragmental cross sectional view of the reinforcing members engaging the wedge-like members contained within the downturned flanges of the table and illustrating the manner of securing the top to the base. Fig. 6 is a perspective view showing the blank from which the channel iron is shaped. Fig. 7 is a perspective view of one end of the channel bar, illustrating the end construction thereof. Fig. 8 is an end view of the channel bar and one of its securing blocks. Fig. 9 is an enlarged detail view illustrating the flexing operation.

The table to which my improved top is herein applied, comprises a lower or base section 9 and legs or supports 10. The top 11 is of usual sheet metal construction coated with porcelain enamel. It comprises a main portion having downturned flanges 12 and 12^a at its forward and rear edges and similar flanges 12^b at its opposite sides. Between the main portion and said downturned flanges there is provided a raised rim portion 13 which serves as a retainer for water or other liquid which may be spilled on the table.

The reinforcing means for the top comprises a pair of wedge-like members 14 engaged in the opposite side flanges 12 and 12^a, and a plurality of stays 15 and 16 entered between said members 14 so as to force them apart. Said members 14 are shaped to provide relatively sharp outer edges adapted to engage with the lower corners of the hooked flanges as shown at 14^a in Figs. 3, 4, and 5, while leaving a space between the upper corners of said flanges and the adjacent corners of the members. The stays 15 are made of a length slightly greater than the normal space between the members 14

when the latter are entered in their respective flanges, so that by forcing the channel bars between the members the latter act upon the lower corners of the flanges to force them outwardly. This movement produces a lever-like action between the flanges and the main portion 11. Thus, referring to Fig. 9, the downturned flange at each side of the top constitutes one arm of a bell crank lever, the other arm of which is formed by the adjoining edge of the main portion 11. Therefore, when the upright arm is swung outwardly from the full line position shown to that shown in broken lines, the horizontal arm is swung downwardly and outwardly, causing the main portion to bend or flex inwardly. When, however, the channel bars are forced into their ultimate position between the members 14, the upper surface thereof firmly engages with the underside of the main portion 11 making it substantially flat as shown in Fig. 4.

For the purpose of securing the channel bars in position I preferably provide securing devices in the form of angular plates 17 interposed between the members and the ends of the channel bars and secured by screws 17^a or the like at their opposite ends to the upper sides of the members and the undersides of the channel bars. These plates are made of relatively thin sheet metal and obviously serve to facilitate the spreading and flexing operation.

As shown in Fig. 2, the reinforcing stays 16 at the ends of the table top are preferably in the form of wooden bars. Thus they facilitate the fastening of the table top upon the base 9 through the medium of screws 9^a or the like (Fig. 5) entered through upper inturned flanges of the base and into the bars.

In the central portion of the table top where the stays are under the greatest strain, I preferably employ the stays 15 formed of metal. This is because of the tendency of wooden stays to shrink or contract when continuously subjected to relatively high temperatures, even though initially kiln-dried.

In the present instance the metallic stays are of channel bar construction so as to accommodate wooden end pieces or blocks 18 providing means for additionally securing the top to the base. These bars are formed from metallic blanks cut to proper forms, as shown in Fig. 6. Thus they comprise a main portion of a length slightly greater than the normal space between the members 14, two side flanges 15^a, and end flanges 15^b. As shown in Fig. 7, said end flanges are adapted to lie adjacent to and extend slightly beyond the ends of the flange members so as to abut against them, thereby providing a flat bearing surface for engaging the wedge-like members 14. The wooden blocks 18 may be secured in the channel bars in any preferred way. Herein, screws 18^a are employed for this purpose, being entered through the side flanges as shown in Fig. 8.

It will be seen that I have produced an effective means for preventing the objectionable bulging of metallic table tops. The construction is exceedingly simple and is capable of being readily applied. Furthermore, it provides means whereby the top may be secured to a supporting base in a convenient manner, and at the same time the reinforcing means cannot be rendered ineffective by subjecting it continuously to extreme heat such, for example, as may occur when the table is placed over a radiator or heat register.

This application is a continuation in part of my copending applications Serial Nos. 485,722 filed July 18, 1921 and 511,597 filed October 31, 1921.

I claim as my invention:

1. As an article of manufacture, a work table comprising a rectangular main portion formed of sheet metal and having opposed integral down-turned flanges, and means for maintaining said main portion flat comprising a pair of bars having outwardly and downwardly inclined outer edges engaging with said flanges near their inner lower edges adapted when forced outwardly to swing said flanges on axes disposed near and parallel to the corresponding edges of the main portion, and a member acting to hold the said bars separated with the main portion flexed downwardly flat against said member.

2. As an article of manufacture, a work table comprising a main portion formed of sheet metal having opposed integral downturned flanges, and means for maintaining the main portion flat comprising a pair of bars having relatively sharp outer edges engaging with said flanges near their inner lower edges and adapted when forced outwardly to swing said flanges on axes disposed near and parallel to the corresponding edges of the main portion, and means interposed between said bars acting to hold the flanges outwardly with the main portion flexed downwardly.

3. As an article of manufacture, a work table comprising a main portion formed of sheet metal having opposed hooked flanges, a pair of bars having relatively sharp outer edges engaging with the hooked portions of said flanges, and a plurality of members interposed between said bars perpendicular thereto, said members being slightly longer than the normal distance between the bars engaging in said flanges and operating to hold said flange swung outwardly on axes disposed near and parallel to the corresponding edges of the main portion with the

main portion flexed downwardly flat upon said members.

4. As an article of manufacture, a work table comprising a main portion formed of sheet metal with opposed integral down-turned flanges, and means engaging said flanges near their lower inner edges only and acting to hold them swung outwardly on axes disposed substantially in the plane of the main portion with the main portion flexed downwardly.

5. The combination with a table top formed of sheet metal and comprising a main portion and down-turned side flanges, of means adapted to engage opposed flanges at their inner lower edges only to impart an outward swinging movement thereto while the main portion is flexed downwardly, said side flanges when maintained in their outwardly swung positions serving to prevent an upward bulging of the main portion.

In testimony whereof, I have hereunto affixed my signature.

RUDOLPH HOFFMAN.