May 3, 1938. G. A. LENZ 2,115,727

FOLDING TABLE

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Fig. 1.

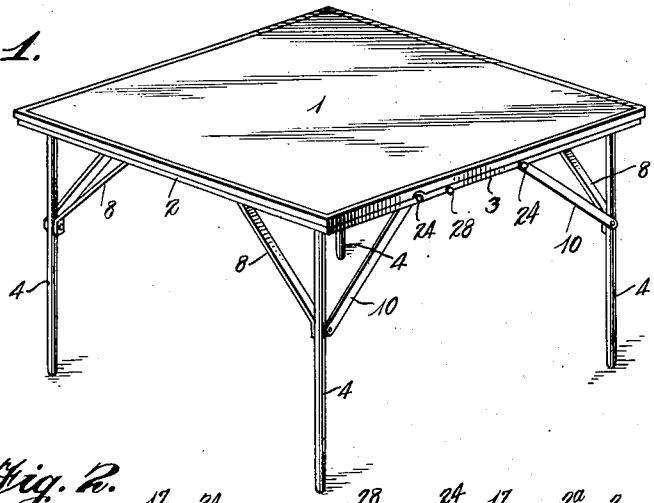
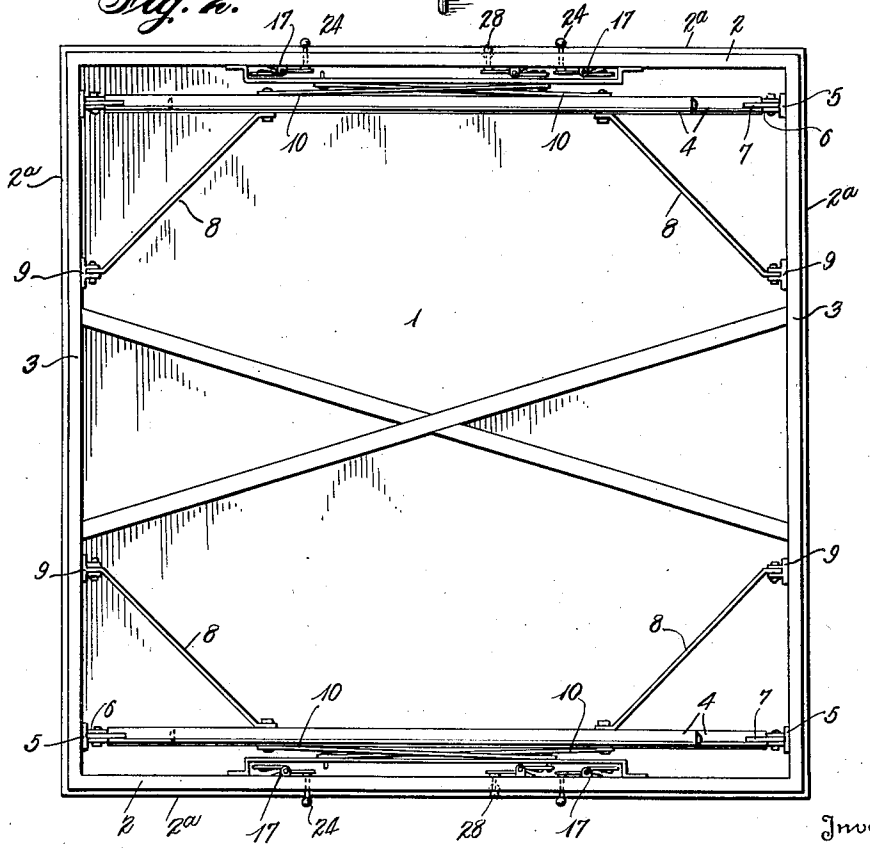


Fig. 2.



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Fig. 3.

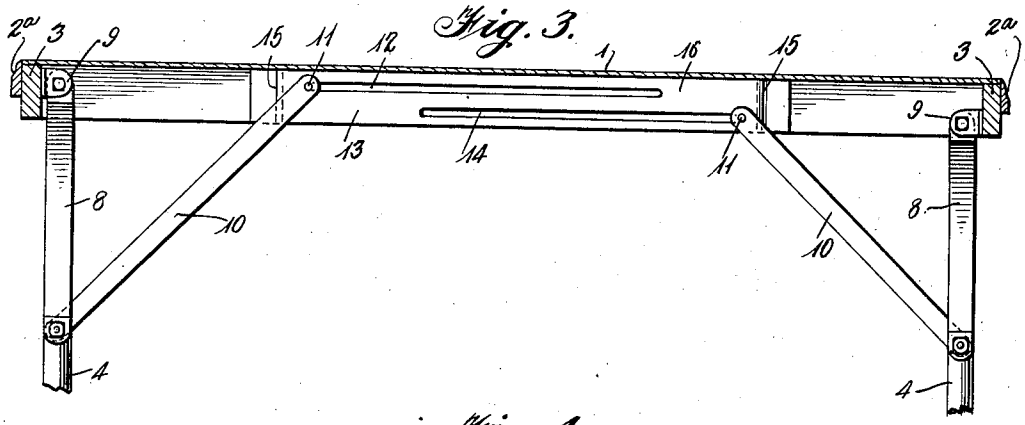


Fig. 4.

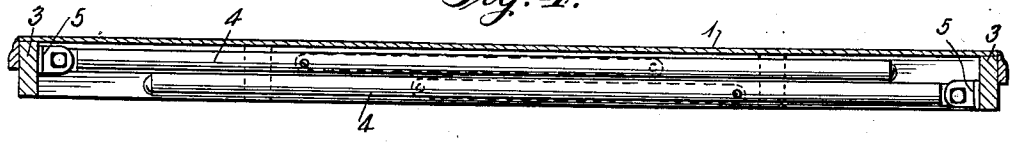


Fig. 5.

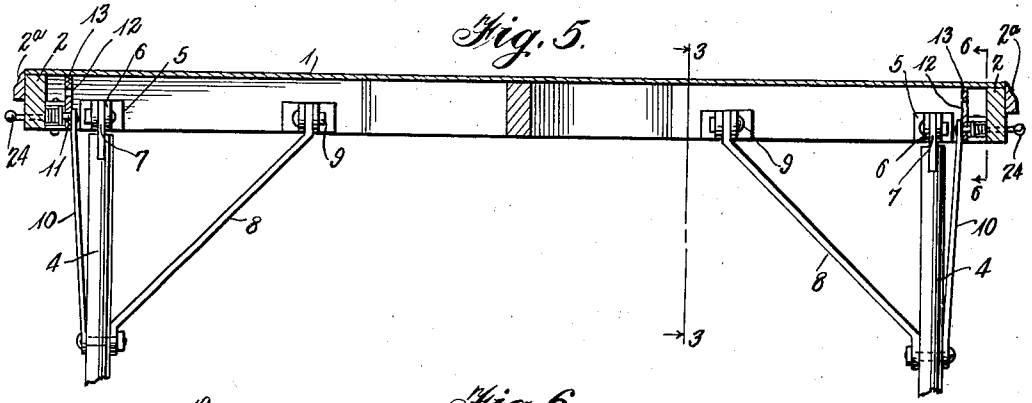


Fig. 6.

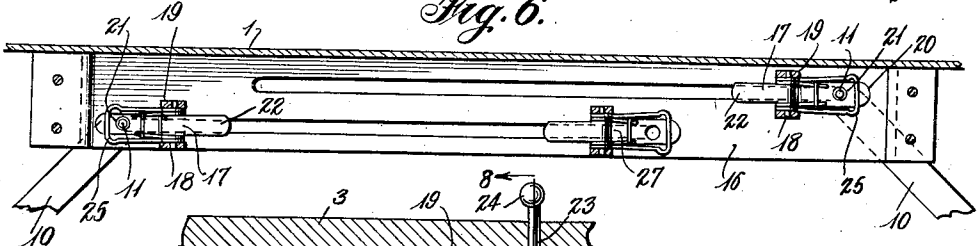


Fig. 7.

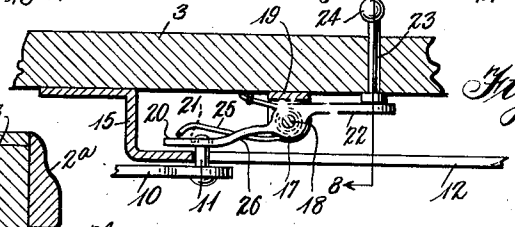
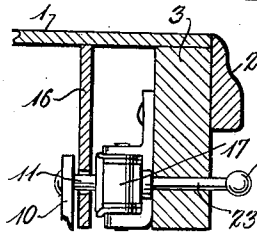


Fig. 8.



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UNITED STATES PATENT OFFICE

2,115,727

FOLDING TABLE

George A. Lenz, Fort Sill, Okla.

Application September 8, 1937, Serial No. 162,879

4 Claims. (Cl. 311—77)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes without the payment of any royalty thereon.

This invention relates to furniture and more particularly to folding tables of a type in general use as card or sewing tables wherein the legs may be folded compactly against the under side of the top of the table for transportation or storage purposes, said legs and braces therefore being firmly locked in extended positions and also in folded positions by inflexible means requiring no adjustment for the purpose of maintaining firm and rigid operation of the parts. All of said parts, when the legs are folded, are adapted to rest within the depth of a narrow flange extending downwardly from the edge of the table.

An object of the invention is to provide means for firmly locking the legs in extended positions and also in their folded positions, and further with means for tripping or releasing said locking means from either position of the legs from the edge of the table, said releasing means being in the form of a rounded slightly projecting member, not likely to be struck by or catch the clothing of a person at or passing the table.

Another object of this invention is to provide a simple, inexpensive, yet durable, construction that lends itself to the use of an all wood or metal construction as well as one of part wood and metal construction, and is applicable to the use of either of the above materials for the top or legs.

A further object in view is to provide positive leg locking means in their extended positions and also in their folded positions and avoid accidental displacement of said means in either position of the legs.

Another object is to provide easily accessible tripping means to release the leg locking means that does not mar the appearance of the table and will permit resting the table, when the legs are folded, on either of its edges, without releasing the legs from their folded positions.

Other objects will appear as the structure is described in detail.

The drawings show one embodiment of the invention, but it will be understood that the embodiment shown is for the purpose of illustration only and that slight changes in form and minor details of construction may be resorted to without departing from the spirit of the invention, in which:

Fig. 1 is a perspective view of the improved table.

Fig. 2 is an inverted plan of the table with the legs folded.

Fig. 3 is a vertical section of the table on line 3—3 of Fig. 5, looking in the direction of the arrows, the legs extended and broken off adjacent to the braces.

Fig. 4 is a similar view with the legs folded.

Fig. 5 is a vertical section taken at right angles to Figs. 3 and 4.

Fig. 6 is an enlarged vertical section on line 6—6 of Fig. 5, looking in the direction of the arrows, showing in elevation the locking latches at one side of the table.

Fig. 7 is a horizontal section directly above one of the locking latches.

Fig. 8 is a vertical section on line 8—8 of Fig. 7, taken in the direction of the arrows.

In the embodiment of the invention shown in the drawings, 1 indicates the top of the table, which is preferably rectangular in form, having guide supporting flanges 2 and leg mounting flanges 3, depending from opposite edges of the table respectively. The top of the table may be of any suitable material, such as thin, inexpensive, artificial or natural board and wooden flanges, which constitutes a rigid, supporting frame, or the top and flanges may be of sheet metal, pressed to form the top and flanges in one piece, said flanges in any instance being provided with an outwardly extending portion 2^a, adapted not only to strengthen and improve the appearance of the table but to prevent accidental tripping of the leg locking means when the legs are in their folded positions, which will be described later.

The legs 4, are separately mounted at each corner of the table, two of said legs at opposite sides of the table are adapted to operate on their respective pivots toward each other when folded and rest in their folded positions one upon the other and parallel with the adjacent side flange, which will later be identified as oppositely arranged guide plate supporting flanges. The legs are pivotally mounted by means of brackets 5 secured to the leg mounting flanges 3, said brackets having projecting ears 6 between which reduced extensions 7 of the legs are mounted on pins passing through said parts. The pivots for the legs, the latter being preferably of metal tubing of small gauge, are arranged on opposite leg mounting flanges, on different planes a distance equal to the thickness of the legs, which permits the two legs mounted on one of the flanges to rest when folded, flat along beneath the entire length of the legs mounted on the op-

posite leg mounting flange, said last mentioned legs, in turn resting flat along their entire length, against the under face of the top of the table, thereby providing for a perfect nesting of the four legs, two of which are mounted on opposite flanges of the table.

The legs **4** when extended are rigidly maintained in position against strains from all directions by inflexible braces **7** and **8**, arranged at 90 degrees from each other, and prevent displacement of the legs in any direction toward or from the table.

With reference to said braces, there are pivotally mounted at their upper ends on the leg mounting flanges **3** swinging braces **8**, the mounting brackets as seen at **9** are similar in construction to the leg mounting brackets **5** and their pivots are in line. The lower ends of the swinging braces are rigidly mounted on the legs. With the above arrangement of parts, there is no relative movement of the legs and swinging braces when the legs are moved to either the extended or folded positions.

The traveling braces **10** are pivotally mounted at their lower ends on the legs, preferably on the securing means at the lower ends of the swinging braces, on the opposite sides of the leg therefrom, said traveling braces at their upper ends being provided with lock pins **11** adapted to operate in guide slots **12** arranged adjacent to the upper edge of guide plates **13** mounted on the inner faces of oppositely arranged guide supporting flanges **2**. The slots **12** in the guide plates **13** are arranged near the upper edges of said plates for the purpose of aligning the traveling brace, with its respective leg, when folded and resting against the under side of the table top. The guide plates **13** are also provided with slots **14** arranged slightly below slots **12** and are adapted to control the travel of lock pins **11** at the ends of traveling braces **10** mounted on the legs that, when folded, rest beneath the adjacent legs, the slot **14** being located in such a position as to cause the traveling braces, when the parts are folded, to rest parallel with their respective legs.

The guide plates **13** are mounted on the inner faces of opposite flanges **2** in any preferred manner and consist of bent end portions, secured at **15** to the flanges **2**, and have intermediate portions **16** in which slots **12** and **14** are formed, said slotted portions of the guide plate being arranged to provide spaces between the plates and the inner faces of the flanges **2**, and in said spaces the locking latches **17** are mounted, there being three on opposite sides of the table, of identical construction and operation, and a description of one, it is believed, will be sufficient.

The locking latch **17**, as shown in enlarged detail in Figs. 6–7 and 8, consists of a rocker arm pivotally mounted at **18** on a supporting member **19** mounted on the inner face of flange **2**, said rocker arm is provided with an arm **20** extending in one direction from pivot **18**, having an aperture **21** therein adapted to receive, securely hold and prevent any movement of lock pin **11** in the slot, said pin being mounted in the upper end of a traveling brace **10** of one of the legs. An arm **22** of the latch extends in an opposite direction from arm **20** and is adapted to be engaged by a tripping rod **23** which is mounted in the flange **2** of the table, and extends a short distance beyond the outer face of said flange and is provided with a smooth rounded end **24** adapted to cast off any clothing that might otherwise be caught thereon. A spring **25** is mounted in such a manner as to firmly hold the aperture in arm **20** in contact with pin **11** when the rocker arm is released, said arm being provided with an inclined portion at **26** to cause the pin **11** to raise arm **20** and automatically slip into its aperture **21** and locked position, when the leg has reached its full extended position.

It will be noted by reference to Fig. 6 of the drawings that a locking latch **27** is located at the end of slot **14** opposite to that occupied by the locking latch **17**, said latch **27** is of the same construction and operation as locking latch **17**, and provides means for maintaining the lower of the two legs at the corresponding side of the table in its nested or folded position, and necessarily the upper of the two legs that is resting thereon in its folded position. The latch **27** is tripped, to permit the extension of the legs, by a tripping rod as seen at **28** in Fig. 2, said tripping rod extending through the flange of the table beneath extension 2^a, but not beyond same, thus avoiding accidental release of the folded legs when the table is resting on its edge in which the tripping latch is mounted.

What I claim and desire to secure by Letters Patent is:

1. A folding table comprising a rectangular top, a flange depending from its edges consisting of two oppositely arranged leg mounting portions and two oppositely arranged guide supporting portions, independently mounted legs pivotally supported on the leg mounting portions of the flanges at the corners of the table, the pair of legs at one side of the table being mounted on a plane beneath that of the pair of legs on the opposite side of the table a distance equal to the thickness of the legs and adapted to fold flat against the under face of the table top, one of said pairs of legs when folded resting beneath the oppositely mounted pair of legs, swinging braces rigidly mounted at their lower ends on the legs and pivotally mounted at their upper ends on the leg mounting flanges in line with their respective leg pivots and adapted to swing with the leg into extended position and brace same in line with its leg mounting flange and into folded position, guide plates mounted on the guide supporting flanges having upper and lower slots therein, traveling leg braces pivotally mounted at their lower ends on their respective legs and having pins at their upper ends to operate in said slot as the legs are swung from folded to extended positions adapted to brace the legs at right angles to said swinging braces, means arranged at the ends of said slots to lock said pins in leg extended positions and means for tripping said locking means.

2. A folding table comprising a rectangular top, a flange depending from its edges consisting of two oppositely arranged leg mounting portions and two oppositely arranged guide supporting portions, all of said portions having outward extensions, independently mounted legs pivotally mounted on the leg mounting portions of the flanges at the corners of the table, the pair of legs at one side of the table being mounted on a plane beneath that of the pair of legs on the opposite side of the table a distance equal to the thickness of the legs and adapted to fold flat against the under face of the table top, one of said pairs of legs when folded resting beneath the oppositely mounted pair of legs, swinging braces rigidly mounted at their lower ends on the legs and pivotally mounted at their upper ends on the leg mounting flanges in line with their respective leg pivot and adapted to swing with the leg into ex-

tended position and brace same in line with its leg mounting flange and into folded position, guide plates mounted on the guide supporting flanges having upper and lower slots therein, traveling leg braces pivotally mounted at their lower ends on their respective legs and having pins at their upper ends to operate in said slot as the legs are swung from folded to extended positions adapted to brace the leg at right angles to said swinging braces, means arranged at the ends of said upper and lower slots to lock the legs in extended positions comprising a latch having a spring pressed rocker arm mounted on the inner face of the guide mounting flange, one of said arms adapted to engage said pin at the end of a traveling brace to maintain the leg in extended position and a tripping rod extending through said flange adapted to trip said latch from the outer edge of the table.

3. A folding table comprising a rectangular top, a flange depending from its edges consisting of two oppositely arranged leg mounting portions and two oppositely arranged guide supporting portions, all of said portions having outward extensions, independently mounted legs pivotally mounted on the leg mounting portions of the flanges at the corners of the table, the pair of legs at one side of the table being mounted on a plane beneath that of the pair of legs on the opposite side of the table a distance equal to the thickness of the legs and adapted to fold flat against the under face of the table top, one of said pairs of legs when folded resting beneath the oppositely mounted pair of legs, swinging braces rigidly mounted at their lower ends on the legs and pivotally mounted at their upper ends on the leg mounting flanges in line with their respective leg pivot and adapted to swing with the leg into extended position and brace same in line with its leg mounting flange and into folded position, guide plates mounted on the guide supporting flanges having upper and lower slots therein, traveling leg braces pivotally mounted at their lower ends on their respective legs and having pins at their upper ends to operate in said slot as the legs are swung from folded to extended positions adapted to brace the leg at right angles to said swinging braces, means arranged at the ends of said slots to lock said pins in leg extended positions, means for tripping said locking means, and means for locking said legs in folded position comprising a latch having a spring pressed rocker arm mounted on the inner face of the guide mounting flange arranged at the ends of the lower slots and adapted to engage pins at the end of the traveling braces of their respective legs.

4. A folding table comprising a rectangular top, a flange depending from its edges consisting of two oppositely arranged leg mounting portions and two oppositely arranged guide supporting portions, all of said portions having outward extensions, independently mounted legs pivotally mounted on the leg mounting portions of the flanges at the corners of the table, the pair of legs at one side of the table being mounted on a plane beneath that of the pair of legs on the opposite side of the table a distance equal to the thickness of the legs and adapted to fold flat against the under face of the table top, one of said pairs of legs when folded resting beneath the oppositely mounted pair of legs, swinging braces rigidly mounted at their lower ends on the legs and pivotally mounted at their upper ends on the leg mounting flanges in line with their respective leg pivot and adapted to swing with the leg into extended position and brace same in line with its leg mounting flange and into folded position, guide plates mounted on the guide supporting flanges having upper and lower slots therein, traveling leg braces pivotally mounted at their lower ends on their respective legs and having pins at their upper ends to operate in said slot as the legs are swung from folded to extended positions adapted to brace the leg at right angles to said swinging braces, brace locking latches mounted on the guide flanges adapted to engage the traveling pins at the ends of the traveling leg braces and lock latches mounted on the guide supporting flanges adapted to lock the lower pair of legs in folded position and tripping rods extending through the flanges operable from the outer face of said flanges adapted to trip said latches and release said pins, said tripping means for the lower latches being arranged beneath the outward extension of said flanges.

GEORGE A. LENZ.