Nov. 5, 1935. W. M. BOENNING 2,020,014

FOLDING FURNITURE LEG

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Fig. 1.

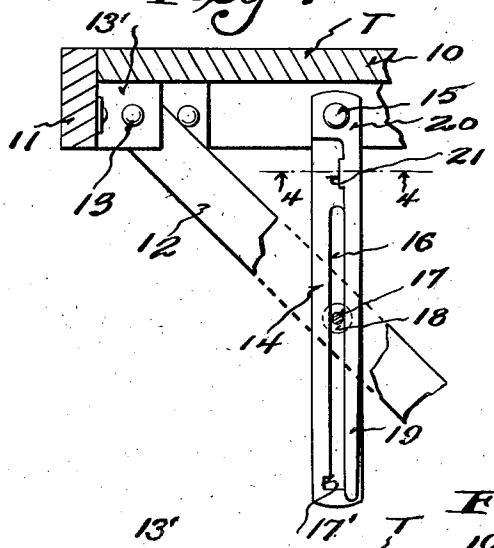


Fig. 3.

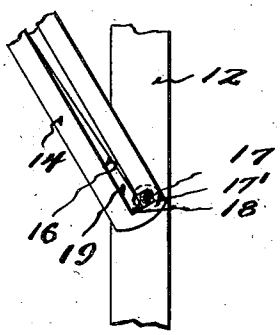


Fig. 2.

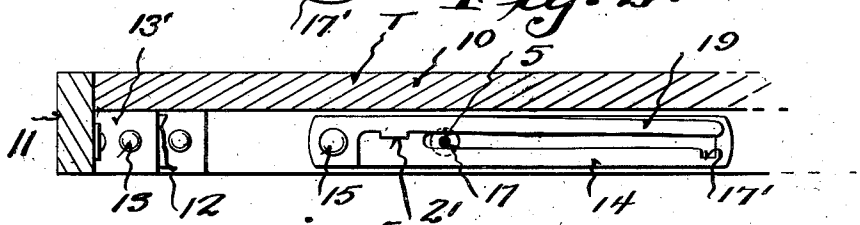


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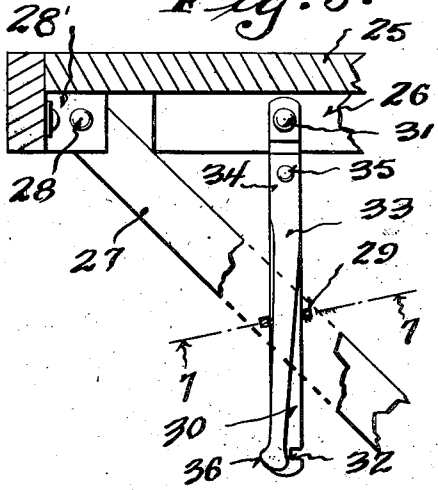


Fig. 7.

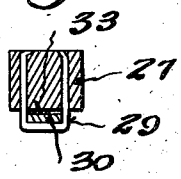
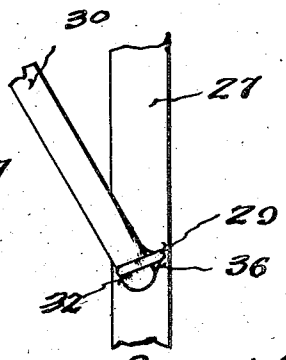


Fig. 6.



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Fig. 8.

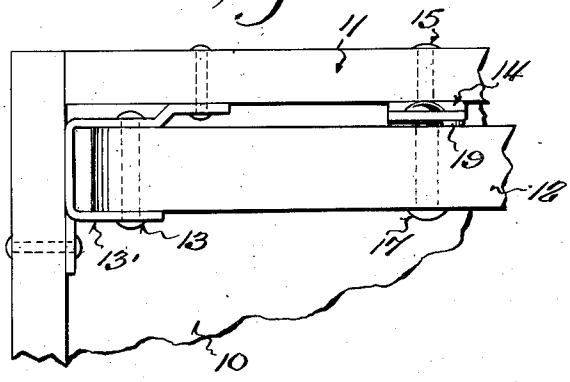


Fig. 9.

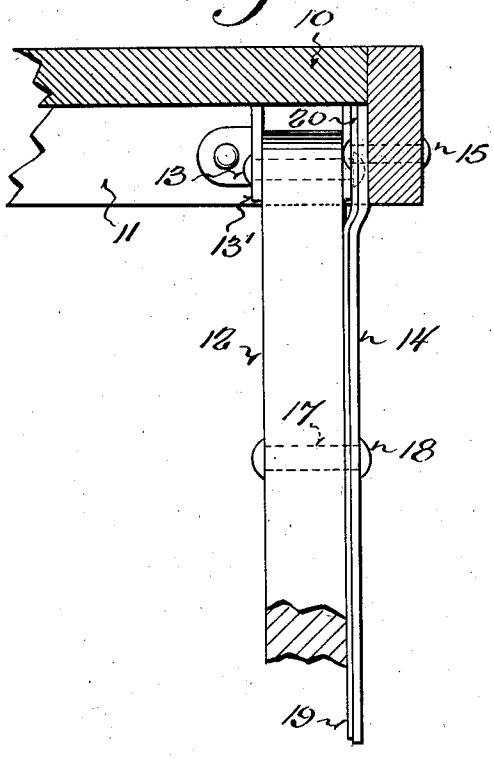


Fig. 10.

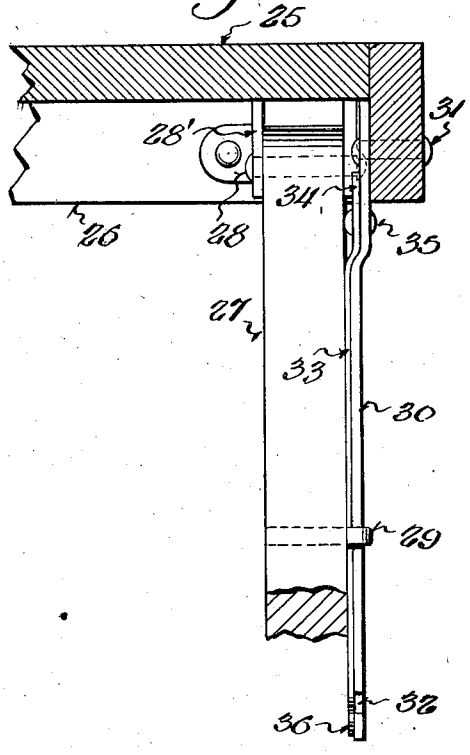
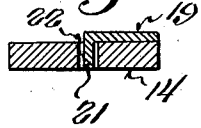


Fig. 4.



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UNITED STATES PATENT OFFICE

2,020,014

FOLDING FURNITURE LEG

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Application September 22, 1934, Serial No. 745,088

4 Claims. (Cl. 311—98)

This invention appertains to furniture, and more particularly to folding furniture legs of the type particularly adapted for use in conjunction with folding card tables and the like.

One of the important objects of my invention is to provide a novel brace and lock for the swinging legs of card tables, whereby when the leg is swung to its operative position, the same will be automatically held against accidental swinging movement until manually released.

Another salient object of my invention is the provision of means for manually releasing the lock or latch by movement of the brace itself, whereby the necessity of actuating extraneous catches, latches, and the like, is eliminated.

A further object of my invention is the provision of means for creating a tension at all times between the brace and the leg, whereby accidental movement of the leg, after the same has been moved to its folded position, will be prevented.

A further object of my invention is the provision of a leg brace having pivotal connections with the table top, and sliding and swinging engagement with the leg carried guide member, the brace having a keeper notch therein, with resilient means normally urging the brace and leg guide member towards one another so that when the leg guide member reaches the keeper notch, the same will ride therein to hold the leg securely against further accidental movement. Manual movement of the brace against the tension of the resilient means functions to release the guide member from latching engagement with the walls of the keeper notch, whereby the leg can be quickly swung to its folded position.

A still further object of my invention is to provide a novel brace and latch for the swinging legs of a card table, which will be of an exceptionally simple and durable construction, and which can be incorporated with card tables at a small cost.

With these and other objects in view, the invention consists in the novel construction, arrangement, and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a fragmentary vertical section through one corner of a card table, illustrating the use of my improved leg brace and latch, the leg being in its partly opened position, and broken away to more clearly illustrate the connection between the same and the brace.

Figure 2 is a view similar to Figure 1, showing the position of the novel brace and latch when the leg is in its completely folded position, the leg being broken away to more clearly illustrate the brace.

Figure 3 is a fragmentary side elevation of the leg and brace, looking from the opposite side of Figure 1, showing the leg in its operative extended position.

Figure 4 is a detailed section taken on the line 4—4 of Figure 1, showing the connection between the tension spring and the brace the view being on a larger scale than Figure 1.

Figure 5 is a fragmentary sectional view similar to Figure 1, showing another form of my improved brace and latch.

Figure 6 is a fragmentary side elevation showing the modified form of latch with the leg in its extended operative position, the view being taken from the opposite side of Figure 5.

Figure 7 is a detail section taken on the line 7—7 of Figure 5, illustrating the connection between the leg and the novel brace and latch.

Figure 8 is an enlarged fragmentary bottom plan view of one corner of a table, illustrating that form of brace shown in Figures 1 to 4, inclusive applied thereto, the table leg being in its partially open position.

Figure 9 is an enlarged fragmentary vertical sectional view, looking at right angles to Figure 1 of the drawings, and showing that form of brace illustrated in Figure 1.

Figure 10 is an enlarged fragmentary vertical sectional view, looking at right angles to Figure 5, and illustrating that form of brace shown in Figure 5.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter T generally indicates a card table, which, as shown, includes the table top 10 having side rails 11 secured thereto. Each corner of the table top supports a swinging leg 12, and for the purpose of simplicity I have only illustrated one corner of the table with one leg. The leg 12 is pivotally connected, as at 13, to a corner bracket 13', which can be of any preferred construction.

As heretofore stated, one of the important features of my present invention is the provision of the use of the novel brace 14 for the leg 12. In Figures 1 to 4, inclusive, the brace 14 is in the nature of a metallic strap, and the same has its upper end offset and pivotally mounted upon a pin 15 rigidly connected to one of the side rails 11 of the table top. A longitudinally extending guide slot 16 is formed in the brace 14, and one

wall of the slot at its outer end is provided with a keeper notch 17', for a purpose which will be later set forth. The leg 12 carries a guide pin or rivet 17, which is slidably mounted within the slot 16. Consequently, during the opening and closing movement of the leg 12 the pin 17 rides in the slot 16 and swings the brace on its pivot pin 15. The outer end of the pivot pin or rivet 17 is provided with a head 18 which engages the outer face of the brace.

Extending longitudinally of the brace strap 14 is a flat resilient leaf spring 19, the use of which forms one of the salient features of my invention. This leaf spring extends the full length of the slot 16 and at an angle thereto, so that the outer end of the spring normally lies in close proximity to the keeper notch 17'. The inner end of the leaf spring is rigidly secured to one face of the brace strap in any preferred manner. As shown, the inner end of the leaf spring is provided with a head 20, which lies flush against one face of the brace strap 14 at the inner end thereof, and the pivot pin 15 extends through the head. The inner edge of the spring can be provided with a laterally extending lip or tongue 21, which is received in a slot 22 formed in the brace 14. This prevents swinging movement of the spring on the pivot pin 15.

Due to the angular position of the inner edge of the spring 19 relative to the walls of the notch, the guide pin or rivet 17 of the leg normally bears against this edge of the spring. Consequently, a friction or drag is created on the pin 17 at all times, which functions to prevent accidental swinging movement of the leg incident to the carrying of the table when the leg is in its collapsed or folded position. The tension on the guide pin 17 increases as the pin reaches the outer end of the slot 16, and thus when the leg reaches its extreme extended operative position, the spring will be flexed to such an extent as to forcibly urge the pin 17 into the keeper notch 17', and the tension of the spring is such as to securely hold the pin 17 in the keeper notch. Consequently, the table leg is securely held in its operative position.

When it is desired to release the leg, and to swing the same back to its closed or collapsed position, it is merely necessary for the operator to push on the brace strap 14 and against the tension of the spring 19, which will move the brace away from the pin 17, allowing the leg to be swung on its pivot 13.

From the foregoing description, it can be seen that I have provided an exceptionally simple and durable means for bracing the leg and holding it securely in extended position.

Obviously, the brace itself is open to certain modifications, and in Figures 5 to 7, inclusive, I have shown another preferred form of my invention. In these figures the numeral 25 indicates the table top, and 26 the side rails thereof. The table leg 27 is pivotally connected, as at 28, to a corner piece 28'. The leg 27 in this form carries a U-shaped staple or guide member 29 in lieu of the guide pin or rivet 17, and this U-shaped staple embraces the brace strap 30. The upper end of the brace strap 30 can be off-set, and is pivotally connected to the table top by means of a pivot pin or bolt 31. The outer edge of the brace strap adjacent to its lower end is provided with a keeper notch 32, which is adapted to receive one leg of the U-shaped guide 29, when the leg is in its extended operative position, as shown in Figure 6 of the drawings.

Rigidly secured to one face of the brace strap 30 is a flat resilient leaf spring 33. This leaf spring extends longitudinally of the strap 30, and at an angle to the side edges of the strap, terminating adjacent to the outer end of the strap. In securing the spring 33 in position, the same can be provided with a head 34 at its inner end, which can be securely riveted, as at 35, to the brace strap. The extreme free outer end of the spring has formed thereon the laterally projecting nose 36, and it is to be noted that this nose lies adjacent to the keeper notch 32.

In operation of this form of my invention, when the leg is swung to its open position, one leg of the U-shaped guide will ride on one edge of the leaf spring, and create a tension thereon. This tension increases as the guide reaches the outer end of the spring, and as the guide 29 rides on the nose 36, the other legs of the guide and the strap are moved toward one another, and the last-mentioned leg of the guide will snap into the keeper notch 32. This will effectively hold the leg in its open extended position against accidental swinging movement. When it is desired to move the leg back to its folded or collapsed position, the brace is swung against the tension of the spring 33 until the guide rides out of the keeper notch 32, at which time the leg can be swung on its pivot.

Changes in details may be made without departing from the spirit or scope of my invention, but what I claim as new is:—

1. The combination with an article of furniture including a top, a leg, and means hingedly connecting the leg to the top; of a brace and latch for the leg including a brace strap pivotally connected to the top, guide means slidably connecting the brace and strap together, the strap having a keeper notch therein, a flat leaf spring carried by one face of the strap rigidly secured at one end to the inner end of the strap, said leaf spring lying flat against the brace strap and extending longitudinally of the strap at an angle to the side edges of the strap with one longitudinal edge frictionally engaging the guide member during the swinging movement of the leg, said spring normally urging the guide member into the keeper notch when the leg is in its extended position.

2. The combination with an article of furniture including a top, a leg, and means pivotally connecting the leg to the top; of a brace and latch for the leg including a brace strap pivotally connecting at its inner end to the top, said strap having a longitudinally extending guide slot therein, one wall of the guide slot adjacent to the outer end thereof being provided with a keeper notch, a guide pin carried by the leg slidably received within the guide slot, and a flat leaf spring extending longitudinally of one face of the strap and flat against the same and rigidly secured at its inner end to the inner end of the strap, said spring extending at an angle to the slot with one longitudinal edge frictionally engaging the guide pin, whereby the guide pin will be urged into the keeper notch when the leg is in its extended position.

3. The combination with an article of furniture including a top, a leg, and means pivotally connecting the leg to the top; of a brace and latch for the leg including a brace strap, means pivotally connecting the brace strap to the top, the brace strap having a keeper notch in one edge thereof adjacent to its outer end, a flat leaf spring arranged longitudinally of one face of the

strap, means rigidly connecting the inner end of the spring to the inner end of the strap, said spring extending at an angle to the side edges of the strap, a U-shaped guide carried by the leg and slidably receiving the brace and spring, the spring normally engaging the guide to create tension thereon and for urging the guide into the keeper notch when the leg is in its extended position.

4. The combination with an article of furniture including a top, a leg, and means pivotally connecting the leg to the top; of a brace and latch for the leg including a brace strap, means pivotally connecting the brace strap to the top, the brace strap having a keeper notch in one edge thereof adjacent to its outer end, a flat leaf spring arranged longitudinally of one face of the strap, means rigidly connecting the inner end of the spring to the inner end of the strap, said spring extending at an angle to the side edges of the strap, a U-shaped guide carried by the leg and slidably receiving the brace and spring, the spring normally engaging the guide to create a tension thereon and for urging the guide into the keeper notch when the leg is in its extended position, and a laterally extending nose formed on the outer end of the spring opposite to the notch for increasing the tension on the guide when the same reaches the notch.

WILLIAM M. BOENNING.