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E. W. NORTH

2,270,217

FOLDING LEG

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Fig. 1.

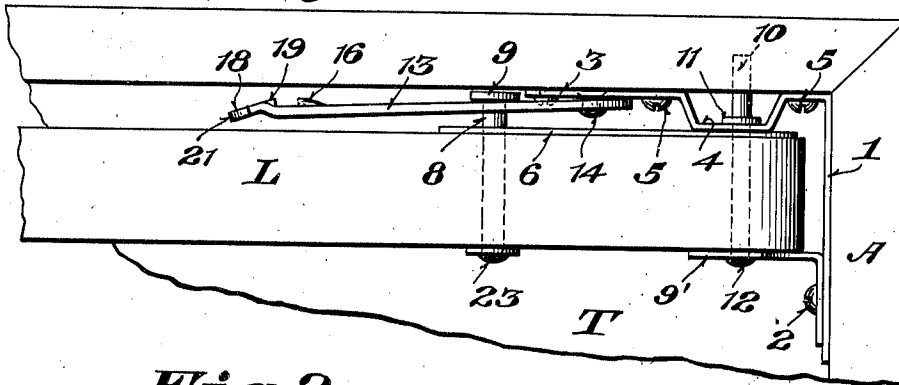


Fig. 2.

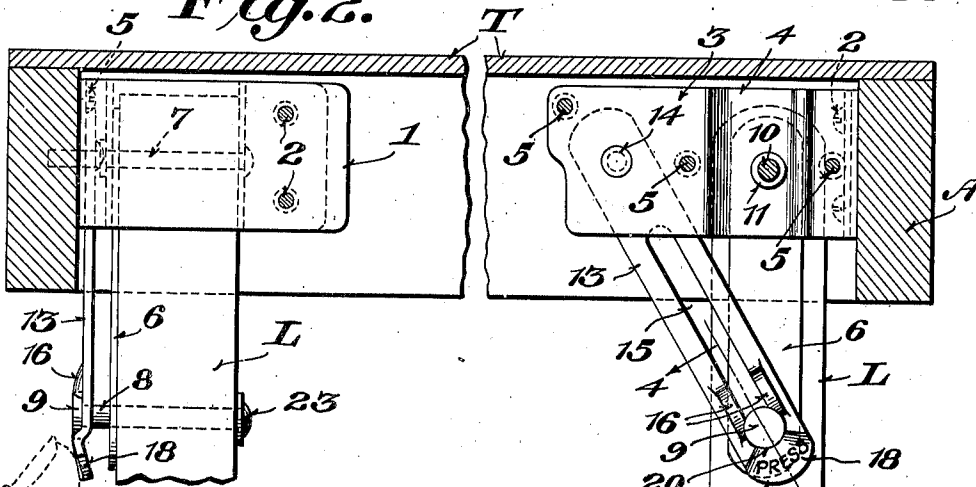


Fig. 3.

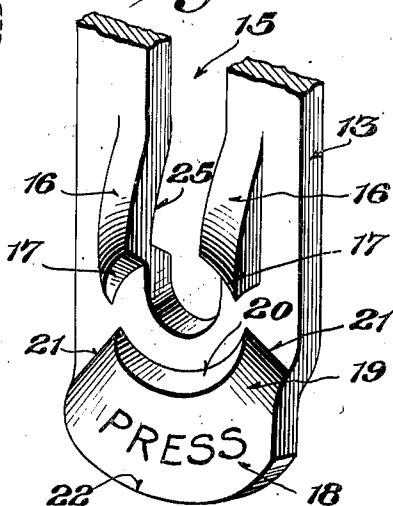
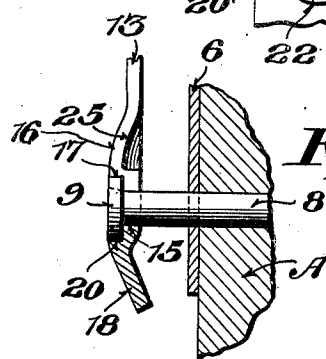


Fig. 4.



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UNITED STATES PATENT OFFICE

2,270,217

FOLDING LEG

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3 Claims. (Cl. 311—98)

This invention relates to folding legs, and more particularly legs of this type which are applied to tables, especially card tables, although not so restricted, and the present application is in substitution, and continuation in part of an application filed by me on May 20, 1938, Serial No. 209,017.

The primary object of the invention is to provide a folding leg structure wherein a brace is employed, to hold the leg in operative position with the utmost of rigidity, and which at the same time enables the brace to be released, preparatory to folding of the leg, in an easy and quick manner.

The invention further and more specifically aims to provide a novel latch structure for the brace wherein the means affording a thumb grip for releasing the brace, forms a part of the means which holds the brace in positive latched position, thereby functioning in a dual manner.

Still further the invention aims to provide latching means for the brace which is practically proof against accidental unlatching movement in normal usage while still permitting free manual predetermined release.

A still further object of the invention is to provide latching means for the brace which avoids the presence of sharp projections or the like which are subject to being caught in the clothing of the players in the instance of card tables, or otherwise users.

Still further the invention aims to provide improved means for mounting the leg and brace, which means is of a simple compact and economical construction and occupies a minimum of space.

Still further the invention aims to provide a novel pivotal mounting for the leg wherein the pintle or pivotal pin thereof acts to brace the mounting, and which firmly holds the pin during upsetting of an end thereof in assemblage of the parts.

Still further the invention aims to provide a mounting and bracing structure for the leg which is extremely strong and rugged, and which affords a maximum protection against the parts becoming loosened through long or continuous use.

The invention has still further and other objects which will be later set forth and of themselves manifested in the course of the following description.

In the drawing:

Fig. 1 is a bottom plan view of the invention, showing a fragment of a card table with one of the legs in folded position;

Fig. 2 is a fragmentary longitudinal section, parts being broken away, showing the leg of the table in Figure 1 in extended or operative position and likewise showing the companion leg on the same side of the table;

Fig. 3 is an enlarged perspective view, partly broken away, of the free or latching end of the brace; and

Fig. 4 is a section on line 4—4 of Fig. 2.

In the illustrated embodiment of the invention, same is shown applied to a card table having a top T, and the customary depending apron A, or the like. A substantially L-shaped main bracket of sheet metal is provided, and which has a short leg 1, which is attached by screws 2 to the apron. The bracket also has a long leg 3, formed with a substantially U-shaped bearing member 4, and is likewise secured to the apron by screws 5, the bracket being shown disposed in the corner of the apron as depicted in Fig. 1.

The table leg is designated L, and is provided with a wear plate 6, which as shown in Fig. 1, engages the U-shaped bearing 4, and is held in place by the pivotal pin or pintle 7 of the leg, and by a stud 8 carried by the leg L.

A second substantially L-shaped bracket 9' engages the side of the leg opposite to that on which the wear plate 6 is mounted and is secured to the leg 1, of the main bracket by the screws 2, above mentioned, the latter thereby acting to secure the two brackets together and both to the apron.

The pivotal pin or pintle 7 extends through the leg of the bracket 9', that engages the leg L, and at its outer end is driven into a socket 10, provided therefor in the apron so as to receive substantial support from the latter. The pintle 7 is formed with an integral rigid collar or equivalent abutment 11, that engages the inner face of the closed side of the bearing 4. The inner end of the pintle is headed at its outer end at 12, against the adjacent leg of the second bracket 9. It will therefore be seen that a three-point support is provided for the pintle 7, namely, by the bracket 9, bearing 4, and the apron A, effectually resisting rocking movement of the pivotal connection of the leg relative to the table.

For the purpose of bracing the leg L, and latching same in operative position, a brace 13 is provided which is formed of spring metal and which is pivoted by means of a rivet 14, at one end thereof to the longer leg 3 of the main bracket. It will be noted that the bearing 4 acts to also space the table supporting leg from the apron so as to accommodate the brace 13 in such space, the brace thus performing a dual func-

tion. The brace 13 is formed with an elongated slot 15 through which the shank of the stud 8 projects, the head 9 of the stud engaging the outer side face of the brace and exerting outward pressure thereagainst. The opposite end of the brace is formed with a similar pair of elongated cams or cam-like surfaces 16, which are located on the respective opposite sides of the slot and engage the under side of the head 9, of the stud. The ends of the cam surfaces are cut away as indicated at 17, so as to conformably engage the adjacent peripheral part of the head 9 of the stud.

The outer end of the brace 13 is formed with a finger-engaging part or member 18, which latter as depicted in Fig. 2 may have the word "Press" applied thereto. The finger-engaging member as clearly depicted in Figs. 1, 3, and 4 is inclined downwardly and inwardly toward the leg and is formed with a raised inner side 19, which is provided with a curved seat 20 thereby to conformably engage the opposite portion of the periphery of the head 9, of the stud, when the parts are in latched position as shown in Fig. 2.

As shown in Fig. 4, the cam surface or tracks are preferably formed by pressing the under side of the brace 13 outwardly at points adjacent the opposite sides of the slot 15, as indicated at 25. Further as depicted in Fig. 3, the ends 21 of the raised portion 19 are beveled or rounded so as to eliminate any sharp projections.

Viewing Fig. 2 particularly, it will be noted that when the brace is in its operative position, the head 9 of the stud lies substantially flush with the high ends of the cams 16, and with the raised side 19 of the finger-engaging member 18, and in addition the free outer end 22 of the finger-engaging member is curved, whereby it will be seen that sharp projections are completely eliminated, which might catch in the clothing of the players or other users of the table.

In assembly of the device, the pintle 7 is applied to the main bracket in the position shown in Fig. 1, and with the brace 13 attached to the main bracket following which the bracket and pintle are secured in position and the screws 5 driven into position. The wear plate 6 is next threaded over the stud and the pintle 17 and the leg then lies positioned over the stud and pintle, following which the stud has the end opposite to its head 9, upset as indicated at 23, and the inner end of the pintle is likewise upset as shown at 12. In the upsetting operation of the pintle, it will be seen that the abutment 11 acts to support the U-shaped bearing 4 and in addition this collar or abutment 11, together with the upset end 12, holds the leg against lateral movement in both directions as evident in Fig. 1, and also enables the frictional engagement of the wear plate and of the leg with the second bracket to be regulated as desired.

It is particularly to be noted that the pintle 7 by virtue of extending into the apron is held against lateral movements and a three-point support is provided for the pivotal connection of the table, namely by the apron, the bearing 4 and the second bracket 9. In addition, the abutment or collar 11 acts to brace and itself is braced by the bearing, so that all of the recited parts cooperate to provide a pivotal mounting for the leg which resists lateral movement of the bearing and the leg of bracket 9' to which the table leg is pivoted, affording maximum protection

against the parts becoming loosened through continuous use, thereby overcoming the common or well known wobbling movements of the legs.

It will be seen in operation that since the brace 13 is of spring nature and exerts outward tension against the head 9 of the stud which will ride upward over the cams 16 until leaving the highest or inner ends thereof, and then snap into the seat provided by the brace, which has a circumferential bounding wall defined by the high ends of the cams, and by the upraised portion 21 at the outer end of the brace that engages the periphery of the head of the stud.

While the invention is illustrated and described in connection with a card table, it is to be expressly understood that same is not so limited, but is susceptible to all uses in which a folding leg is employed, such as with hinged ironing boards, shelves, or other supports, which uses are given merely by way of example, and not exhaustive enumeration of all uses to which the invention can be put.

The right is also expressly reserved to make such changes and alterations as may fall within the scope of the following claims.

What is claimed is:

1. In a table or like leg structure, a leg, means to pivotally connect the leg to a table or like member, a headed stud carried by the leg, a spring brace, means to pivotally connect the brace to a table or like member, said brace having an elongated slot through which the shank of the stud extends and exerting pressure outwardly against the underface of the head of the stud elongated cams on the brace at the respective sides of the slot thereof engageable with the underface of the head of the stud, said cams having outer ends which are shaped to conformably engage the adjacent part of the head of the stud in latched position of the parts, and a finger-engaging member at the outer end of the brace having a raised inner side formed to conformably engage the opposite part of the head of the stud, said inner side of the finger-engaging member being disposed in substantially the outer face of the head of the stud in latched position of the parts so as to lie flush therewith.

2. A table leg structure in accordance with claim 1, wherein the finger-engaging member extends at an angle toward the supporting leg, and wherein the ends of the raised inner side of the finger-engaging member incline downwardly and outwardly of the brace, and wherein the edge of the outer free side of the finger-engaging member is curved.

3. A mounting for table or like legs including a bracket having means for attachment to a table top or other support, said bracket having an outwardly bowed integral bearing member of substantially U-shape, a supporting leg having one side engaged with the closed side of the U-shaped bearing member, a second bracket engaging the opposite side of the supporting leg, and a pivotal pin extended through the second bracket and having a headed end engaged with said second bracket, said pin being extended through the supporting leg and through the bearing and into a part of the table to be supported by the latter, and having its inner end abutting said part of the table, and said pin having a collar fixed thereon and engaging the inner face of the U-shaped bearing of the first named bracket.

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