

June 5, 1923.

1,457,618

S. M. COGGINS

FOLDING TABLE

Filed June 25, 1921

2 Sheets-Sheet 1

FIG. 1

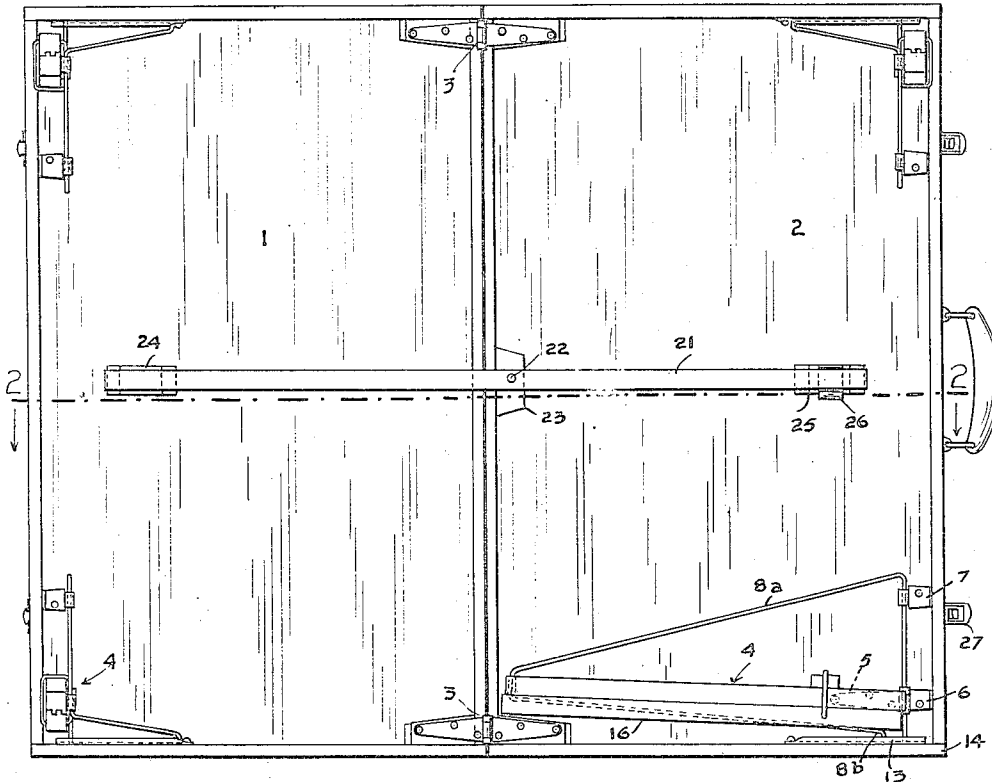
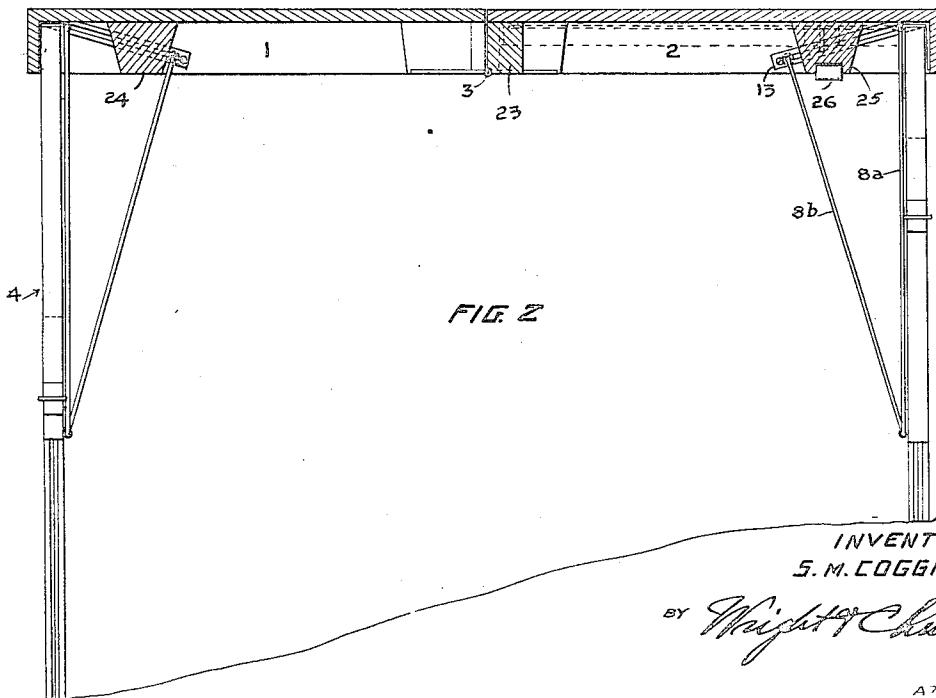


FIG. 2

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FIG. 3

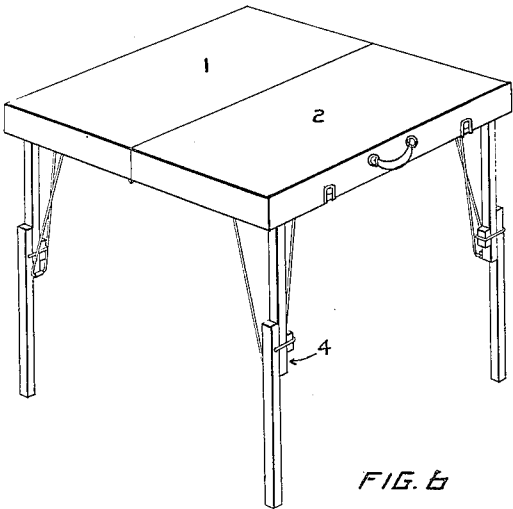


FIG. 4

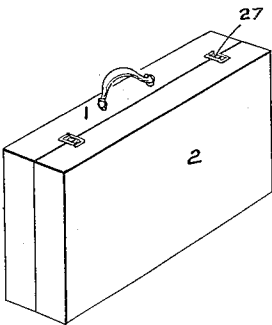


FIG. 5

FIG. 6

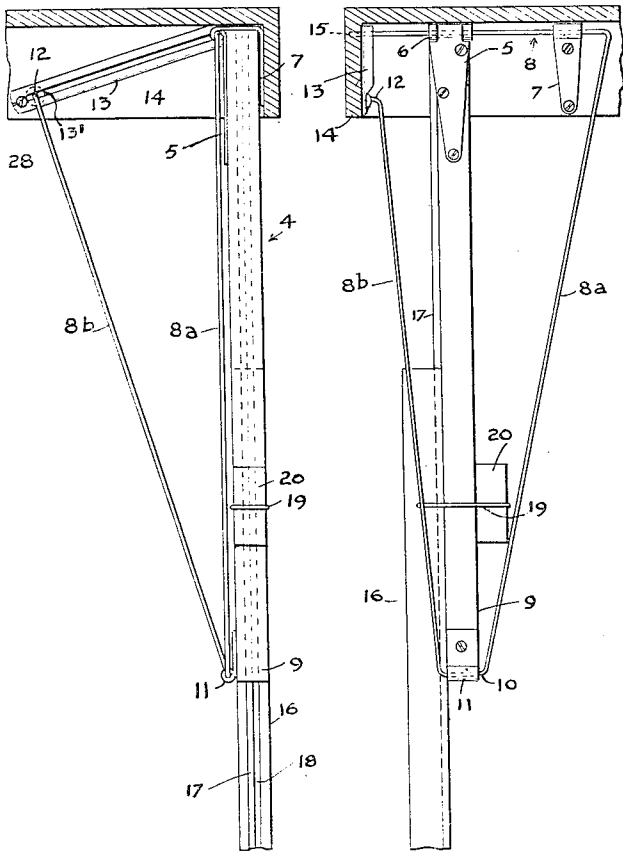


FIG. 8

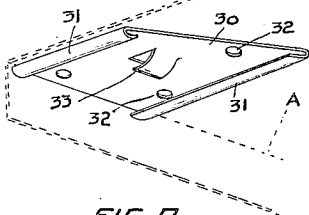


FIG. 9

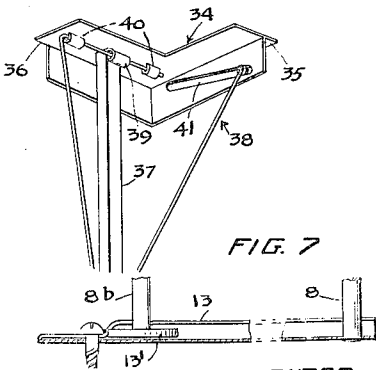
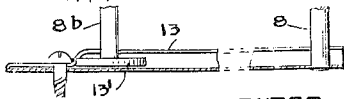


FIG. 7



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1,457,618

UNITED STATES PATENT OFFICE.

SHIRLEY M. COGGINS, OF SAN FRANCISCO, CALIFORNIA.

FOLDING TABLE.

Application filed June 25, 1921. Serial No. 480,312.

To all whom it may concern:

Be it known that I, SHIRLEY M. COGGINS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Folding Tables, of which the following is a specification.

The present invention relates to improvements in folding tables and more particularly to a combined suitcase and folding table which will be highly useful to campers and tourists.

The primary object of the invention is to provide a relatively inexpensive and compact folding-table of the character described in which the legs, braces, etc., when folded will be entirely concealed and take up little or no room in the suitcase, which latter forms the table top when the table is set up, the legs being of simple, strong and rigid construction and capable of being readily lengthened or shortened relatively, so as to permit the setting of the table with the top level while the legs rest upon uneven ground.

Another object of the invention is to provide a novel, strong, simply constructed and inexpensive foldable and extensible leg unit for a table which leg unit, tho particularly designed for use with a suitcase-table of the character described, is also applicable to other articles to be supported and is capable of ready and easy attachment thereto or to any suitcase in fact, the said unit including an automatic locking and bracing means which when the leg is extended or unfolded for use, automatically locks and braces the leg in place.

The invention possesses other advantages and features some of which, with the foregoing will be set forth at length in the following description where I shall outline in full that form of the invention which I have selected for illustration in the drawings accompanying and forming a part of the present specification. In said drawings I have shown one form of the construction of my invention, but it is to be understood that I do not limit myself to such form since the invention as expressed in the claims may be embodied in a plurality of forms.

Referring to the drawings:

Fig. 1 is a bottom plan view of the table showing the top unfolded and the legs folded into the top.

Fig. 2 is a vertical sectional view taken on

line 2—2 of Fig. 1 but showing the table set up on uneven ground and the legs adjusted to maintain the top level.

Fig. 3 is a perspective view of the table as it would appear when in use.

Fig. 4 is a perspective view of the table folded.

Fig. 5 is an enlarged side elevation of one of the leg units shown extended, the table top being shown in section.

Fig. 6 is a view similar to Fig. 5 taken at right angles thereof.

Fig. 7 is a broken detail sectional view of the locking means.

Fig. 8 is a perspective view of a modified form of bracket for securing the leg unit.

Fig. 9 is a fragmentary perspective view of another part of the modified form of bracket such as will be used in connection with the part shown in Fig. 8.

In carrying out my invention I preferably construct the table top in two parts 1 and 2 after the manner of the parts of a suitcase, hinged at 3, altho I may use an ordinary suitcase. To the top I attach the four leg units 4 of my invention so that the latter are capable of being folded into and out of the top and the top may be closed or folded so as to conceal said units and be used as a suitcase.

The leg units, at their inner ends, carry hinge leaves 5 hinged to leaves 6 and 7 which latter are attached and secured by screws to the inside of the top at the outer corners of the sections 1 and 2 thereof. At each of said corners a straight portion of a spring wire or resilient rod 8 is inserted thru the leaves 5, 6 and 7 to act as a hinge pin. After passing thru the leaf 7 which is spaced outwardly to one side of the leg, the wire or rod is bent to extend outwardly as at 8^a, to the outer end of the fixed section 9 of the leg. At this point the wire is bent to provide a bearing portion 10 which extends thru a sleeve or keeper 11 on the leg section 9 and said wire is then extended inwardly as at 8^b back towards the top and terminates in an angularly bent portion 12 which slides in a slotted guide and locking member 13 suitably secured to the side flange 14 of the top. The other end of the wire is extended thru the member 13 and into the side flange as at 15. The guide member is secured so as to slant downward and inward, as shown in Fig. 2, and when the leg is unfolded allows the portions 8^b to extend at an

angle corresponding to the portion 8^a, whereupon the portions serve as braces for the leg and lock the leg in place. The portion 12 carries a washer or small roller 13^a which is larger than the slot is wide so as to hold the portion 12 in the guide members.

Each leg comprises the inner fixed section 9 and an extensible section 16 of approximately the same length as the section 9. The opposed engaging faces of these leg sections are held together by tongues and grooves 17 and 18 respectively and by slip clamping means comprising a rigid wire loop 19 pivoted to the outer section and embracing and receiving the inner section 9.

Carried by the outer portion of the loop 19 is a jaw 20 preferably formed of rubber or some other similar resilient material, which jaw is arranged to engage one side of the stationary leg section so as to hold the sections against collapsing when extended. The loop 19 is of such a size that when held in position at right angles to the leg sections, will permit the extensible section to be moved freely into and out of extended position and when said loop is moved at an angle greater or less than the right angle, it will cause the rubber jaw 20 to frictionally bind upon the inner section and hold the legs in adjusted position. Thus it will be seen that the loop and jaw act as a connecting medium between the leg sections as well as means for locking the extensible section in adjusted position. The provision of the extensible leg with the simple, convenient, reliable and easily adjustable locking means above described, is considered one of the most essential features of this invention.

As a means for bracing the table top a bar 21 is pivoted intermediate its ends as at 22 upon a block 23 to the section 1 of the top and is adapted to be moved from position extending lengthwise of section 1, as shown in dotted lines in Fig. 1, to the position extending across both sections so that it may be engaged upon blocks 24 and 25 on the respective sections and act as a brace. A spring keeper or clip 26 is mounted upon the block 25 and engages one end of the bar 21 so as to hold said bar in bracing position. When this bar is not in use it lies in such position that it will not interfere with the folding of the table top.

When the device of this invention is embodied in a suitcase table of the form shown in the accompanying drawings hereinbefore described, and the table is in collapsed position, as shown in Fig. 4, it has the general appearance of a suitcase and can be carried readily from place to place and packed and secured upon an automobile in a convenient manner. To use the table, the clasps 27 for holding the sections 1 and 2 together are unclasped and the table unfolded so as to present a flat top, as shown in Figs. 1, 2 and 3.

It may then be set on edge or bottom side up or placed in any convenient position to permit the legs to be unfolded. As shown in the drawings, the legs lie folded within the sections of the top and close to the inner side of said sections. The legs are swung outwardly on their hinges and will automatically lock when in unfolded position. As the legs are unfolded the brace 8^b, which is under tension when the leg is folded, will move to the inner end of the slotted guide and locking member 13, of its own accord, due to the spring action thereof and the inner end or angularly bent portion 12 of said portion 8^b will come to rest against an abutment 28 at the outer end of said guide member 12. At this time the portion 8^b is extended at such an angle to the leg that it prevents unintentional collapsing or folding of the leg and serves as a brace. It will thus be seen that the member 8^b automatically moves from position under tension to position for locking and bracing the legs. The portion 8^a is at all times disposed in an angular position corresponding to the bracing and locking position of the portion 8^b and these two portions provide for an effective bracing means for the legs. After the legs have been unfolded the extensible sections 16 thereof may be adjusted as desired, to regulate the height of the table or provide for the setting of the table in level position when the legs rest upon uneven ground. Immediately when the weight of the table is placed upon the legs the loops 19 will assume an angular position and cause the jaws 20 to bind upon a stationary leg section so as to maintain the adjusted position of the leg.

To fold the legs the portions 8^b are forced inwardly, slightly, and the leg is folded inwardly. By continuing the folding movement of the legs, said portions 8^b will be forced by movement of the legs into position under tension, as shown in dotted lines in Fig. 1 of the drawings.

In Figs 8 and 9 there is shown a modified form of attaching a bracket such as may be used to attach the leg units of this invention to the ordinary suitcase or to any other article requiring supporting legs. The special construction of the bracket of this modified form renders the attachment of the leg units, as above described, comparatively simple and easy and makes it unnecessary to change in any way the construction of the device in which the legs are attached. As shown in Fig. 8, a holder plate 30 with inwardly bent retaining flanges 31 on opposite edges is provided with openings 32 in the body thereof to provide for attachment of the plate to a table or like device, as shown at A. A downwardly struck spring locking tongue 33 depends from the plate 30 so as to engage and hold in place in the flanges 31, an angular

leg supporting bracket 34, which latter has flanges 35 and 36 receivable between the flanges 31 and body of the plate 30. The leg unit 37 of this form is the same as in the
5 previously described form and is hinged by a one piece hinge and braces a rod 38 which passes thru a hinged barrel 39 on the leg and hinge barrels 40 on the bracket 34. One side of the bracket is provided with an inclined
10 slot 41 so as to correspond to the slotted guide plate used in the previously described form. It will be apparent that with this means of connection for securing the leg units, the latter may be readily attached to various arti-
15 cles of furniture, to the ordinary suitcase or to any article requiring supporting legs.

I claim:

1. In combination with an article to be supported, legs hinged to and adapted to fold
20 with relation to said article, spring rods secured intermediate of their ends to the outer portion of the legs and extending inwardly and angularly on opposite sides of the legs to and connected with said article, one end of
25 each rod being fixed to said article and a guide member in which the other end of said rod is slidable into and out of position to lock the leg against unintentional folding.

2. In combination with an article to be supported, a plurality of legs, hinge barrels
30 carried on the inner ends of the legs and on said article, spring rods connected intermediate their ends with the outer end portions of the legs and extended divergently inwardly to said article on opposite sides of the
35 leg, certain portions of said rods being extended thru the hinge barrels to hingedly connect the legs and a guide member on said article in which the inner end of the other portions of the wire are slidable.
40

3. In combination with an article to be supported, a plurality of legs, hinge barrels carried on the inner ends of the legs and on said article, spring rods connected intermediate their ends with the outer end portions
45 of the legs and extended divergently inwardly to said article on opposite sides of the leg, certain portions of said rods being extended thru the hinge barrels to hingedly connect the legs and a guide member on said article
50 in which the inner end of the other portions of the wire are slidable and extensible members slidable into and out of extended position upon said legs.

SHIRLEY M. COGGINS.