July 9, 1935. C. J. MILLER 2,007,475

EXTENSION TABLE

Filed Nov. 4, 1933

Fig. 1.

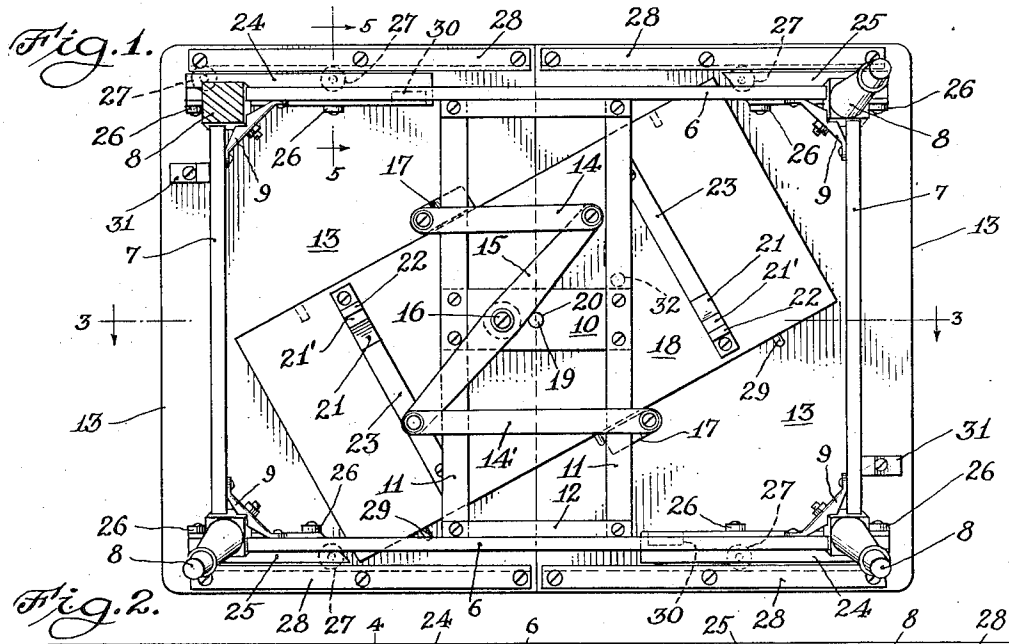


Fig. 2.

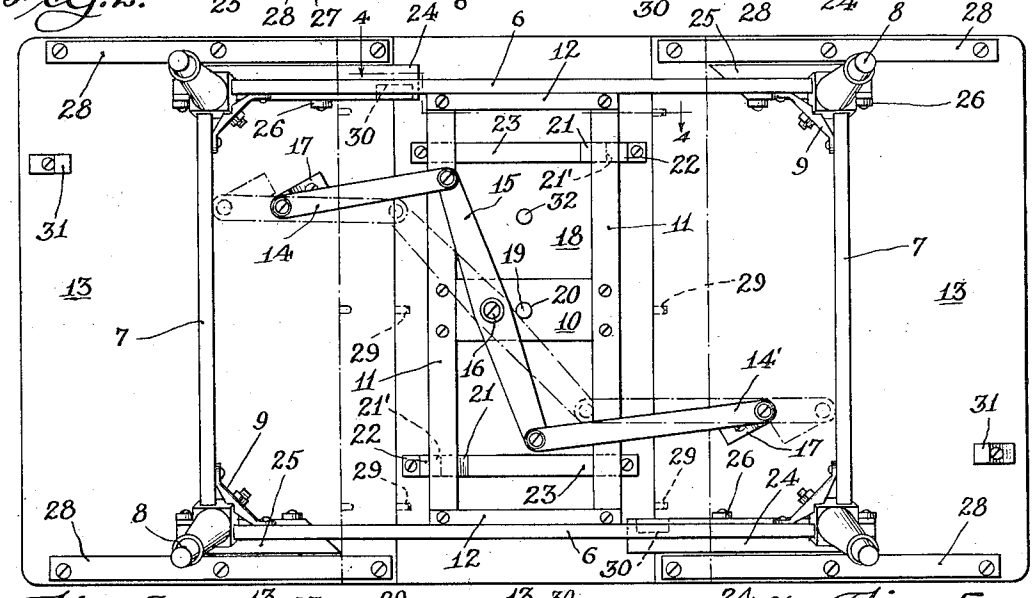


Fig. 3.

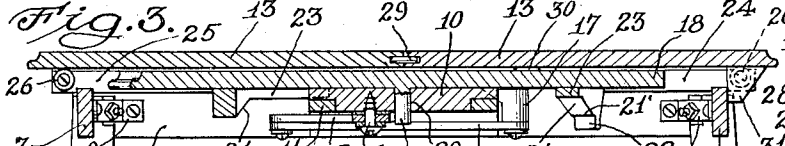


Fig. 5.

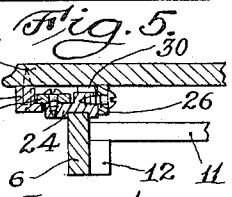
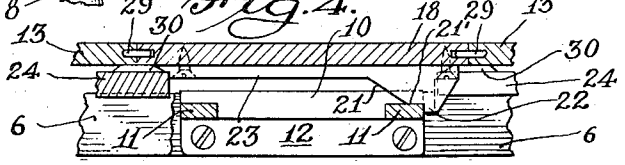


Fig. 4.



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# UNITED STATES PATENT OFFICE

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## EXTENSION TABLE

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Application November 4, 1933, Serial No. 696,678

4 Claims. (Cl. 311—47)

This invention relates to extension tables and its object is to provide for storing an extension leaf beneath the top of the sections of the table and for positioning the extension leaf between the sections and in the plane thereof without removing the leaf from the table.

Another object is to store an extension leaf in a generally lengthwise position beneath the top of the sections of the table and mount it so that it can be swung easily to transverse position between the sections of the table top and automatically raised into the plane thereof without removing the leaf from the table or lifting the leaf manually.

A further object is to mount an extension leaf for a table in the frame of the table so that it can be swung and lowered to storage position generally lengthwise of the table and beneath the top thereof and swung to transverse position and automatically raised to the plane of the top of the table without more manual manipulation than is required to swing the leaf on its swivel.

And a further object is to mount the sections of an extension table to move to open and closed positions and at all times be supported on the aprons of the frame of the table.

In the accompanying drawing illustrating a selected embodiment of the invention:

Fig. 1 is a bottom plan view of the table with the sections closed in abutting relation and the extension leaf in storage position, one leg being shown in section.

Fig. 2 is a bottom plan view of the table with the extension leaf arranged in position between the sections of the top.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a detail sectional view on the line 4—4 of Fig. 2.

Fig. 5 is a detail sectional view on the line 5—5 of Fig. 1.

Referring to the drawing, the frame of the table comprises the side aprons 6, the end aprons 7, and the legs 8 secured together by suitable clamps 9. A swivel block 10 is mounted centrally within the frame on cross bars 11 which are supported at their ends on strips 12 secured to the side aprons 6.

The sections 13 of the top of the table are arranged to slide to and from each other on the frame and, to make both sections slide simultaneously when one section is manually moved, the two sections are connected by links 14, 14' to the ends of a two-arm lever 15 which is pivoted at 16 to the underside of the block 10. The outer ends of the links 14, 14' are pivoted on blocks 17 fastened to the underside of the sections and these blocks form stops for the extension leaf 18 when the latter is in storage position, Fig. 1. The extension leaf is centrally swiveled, being provided with a swivel pin 19 which engages an opening 20 disposed in the block centrally of the table. The pivot 16 of the lever 15 is located at one side of the swivel of the extension leaf and for that reason the link 14' is longer than the link 14 to make the sections of the top move uniformly. Oppositely disposed cams 21 in the form of inclines are provided on the underside of the extension leaf 18 with rests 21' and stops 22 at the top of the inclines, the cams and stops being conveniently mounted on cleats 23 which are secured on the underside of the extension leaf and extend transversely thereof.

A pair of tracks 24, 25 is mounted on each of the side aprons 6 and forms a part thereof, the two tracks 24 being longer than the two tracks 25 to permit the swivel movement of the extension leaf 18 as hereafter described. Upright bearing rollers 26 are mounted on the tracks to support the sections 13 and horizontal rollers 27 are also mounted on the tracks to engage the guide rails 28 fastened to the underside of the sections. These rollers facilitate the sliding movement of the sections on the frame and these sections are at all times supported by the side aprons of the frame. The horizontal rollers 27 and the guide rails 28 insure even movement of the sections and prevent them from wobbling in their in and out movement, besides holding the sections assembled at all times with the frame. The opposing edges of the sections and the extension leaf are provided with dowels 29 as usual in table tops.

The block 10, the cross bars 11 and the strips 12 are a part of the main frame but constitute a swivel frame for the lever 15 and the extension leaf 18 and they are sufficiently below the table top to permit the extension leaf to be swung into storage position beneath the sections 13 as shown in Fig. 1. The spaces between the inner ends of the tracks 24 and 25 on the side aprons accommodate the corners of the extension leaf in its swinging movement and in storage position opposite corners of the extension leaf project over the side aprons. In this storage position the extension leaf is supported on the swivel block 10, the cleats 23 and the side aprons 6, and the sections of the top are supported on the tracks and side aprons. To extend the table, one section is

pulled outwardly and through the medium of the lever and links the other section moves correspondingly. Both sections may be manually pulled but in such case they will also move correspondingly because of the lever and link connections. When the sections are thus extended the extension leaf will be exposed through the opening between the sections and in the position shown in Fig. 1. The extension leaf being swiveled centrally on the fixed block 10 can now be swung with very little effort to a position transversely of the table between the sections 13 and when the cam inclines 21 engage the cross bars 11 the cams will ride up on the cross bars until the stops 22 engage the cross bars and by which time the leaf is then elevated to the plane of the sections 13. The sections 13 are preferably extended to their limit as determined by the engagement of the blocks 17 with the end aprons 7, as shown in broken lines in Fig. 2, so that ample space will be provided for positioning the extension leaf between the sections, but it is not necessary that the sections should be fully extended. After the extension leaf has been raised to the plane of the sections the latter are closed upon the extension leaf, as shown in full lines in Fig. 2, and in that position the sections are supported on the side aprons and the leaf is supported on the rests 21' of the cams and upon lugs 30 which are provided on the tracks 24 to compensate for the slight elevation of the sections above the tracks caused by the rollers 26, as shown in Fig. 5. Stops 31 may be provided on the underside of the sections to engage the end aprons at the limit of the inward movement of the sections, and a stop pin 32 may also be provided on the swivel leaf to engage the swivel block and cooperate with the block 17 to limit the swivel movement of the leaf to storage position. I prefer that the extension leaf shall clear the sections in its swivel movements and in storage position, as shown in Fig. 3, to avoid marring the top face of the leaf, but in storage position the extension leaf will form a support for the sections if an unusual weight is placed upon the table at the middle thereof because in storage position the extension leaf is supported on the swivel block frame.

The invention provides a simple means whereby the extension leaf may be stored out of sight and out of the way beneath the table top and may be swung into position in the plane of the sections of the table to provide an extended top. The leaf is always in assembled position with the other parts of the table and it is easily moved to position to extend the table top and back to storage position without requiring it to be manually lifted or moved except to impart a swivel action thereto.

I have shown the invention embodied in a table of simple form in which the details of construction may be changed as required for tables of different kinds and sizes and I reserve the right to make such changes as may be necessary or desirable to adapt the invention for different kinds and sizes of tables or for other purposes within the scope of the following claims:

I claim:

1. An extension table comprising a frame having side aprons, tracks on said aprons, top sections slidable on said tracks, guide rails on said top sections, and rollers on said tracks engaging said guide rails to guide the end sections in their movement on the frame.

2. An extension table comprising a frame having side aprons, tracks on said aprons, upright rollers and horizontal rollers on said tracks, top sections movable on said upright rollers, and guide rails on the top sections engaged with said horizontal rollers to insure even movement of the sections.

3. An extension table comprising a frame having side aprons, tracks extending above said aprons, top sections movable on said tracks, an extension leaf swiveled on the frame to swing between storage position beneath the top sections and extension position transverse of the table, the tracks on each apron being spaced apart to permit corners of the leaf to pass therebetween and over the aprons in the swiveling movement of the leaf.

4. An extension table comprising a frame, top sections movable on the frame, a swivel block on the frame having a centrally disposed opening therein, an extension leaf having a centrally disposed swivel pin engaged with said opening in the block, said extension leaf being swiveled on said block to swing between storage position beneath the top sections and extension position transverse of the table, a lever pivoted centrally to said swivel block at one side of the opening therein, links of different length attached to the ends of said lever and to insure corresponding movement of the sections, and inclined cams on the extension leaf arranged to engage the frame for lifting the leaf into position between the top sections and in the plane thereof when the leaf is swung to transverse position to extend the table, said cams having rests and stops at the top of the inclines to retain the extension leaf in registration with the top sections of the table to complete the table top.

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