

(No Model.)

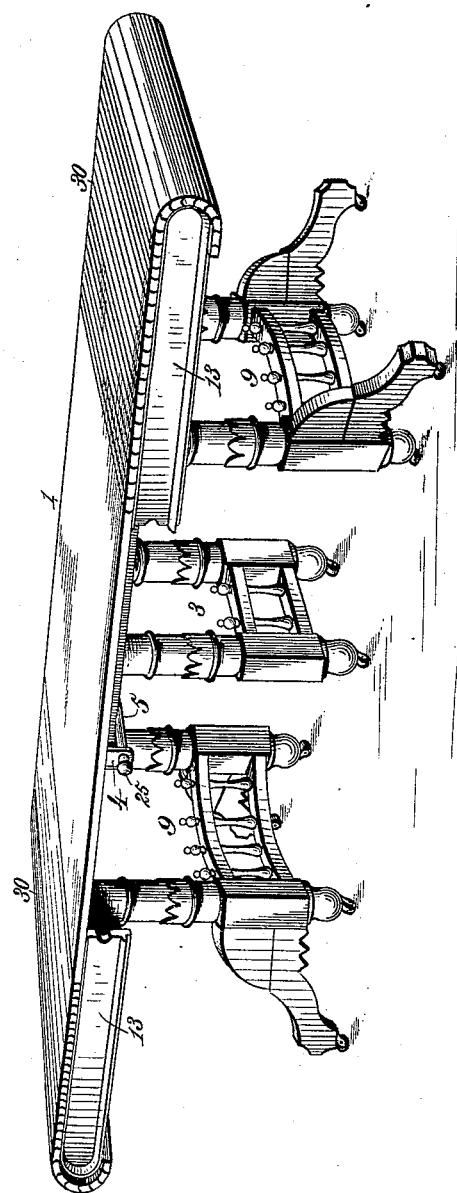
W. H. PICKETT.  
EXTENSION TABLE.

4 Sheets—Sheet 1.

No. 457,429.

Patented Aug. 11, 1891.

Fig. 1.



Witnesses.

*Robert Elliott.*

*J. A. Rutherford.*

Inventor:

*William H. Pickett.*

*By James L. Norris.*

*Atty.*

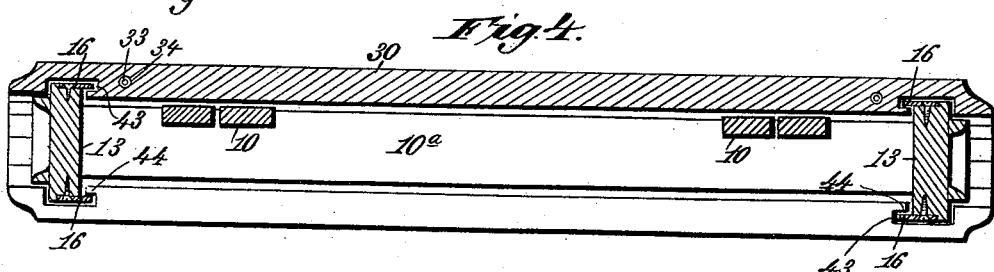
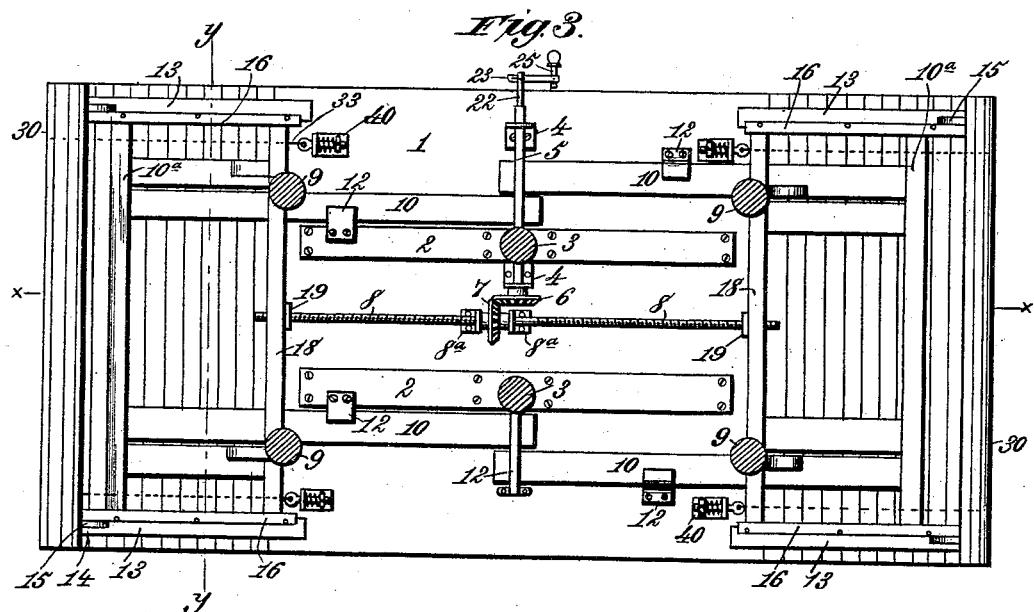
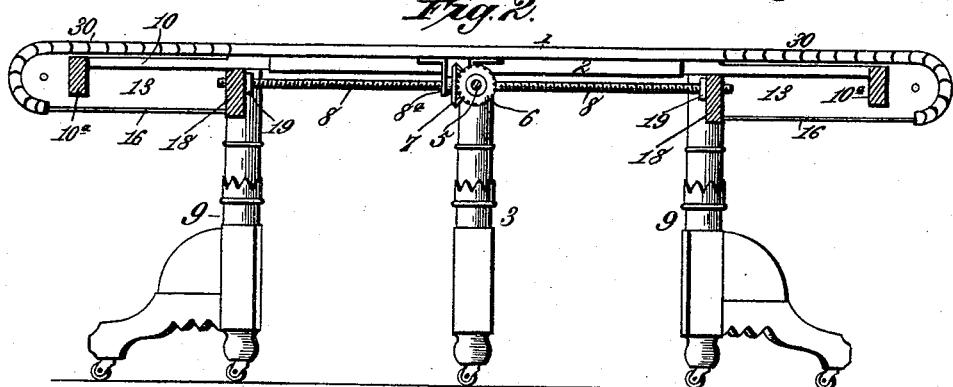
(No Model.)

W. H. PICKETT.  
EXTENSION TABLE.

4 Sheets—Sheet 2.

No. 457,429.

Patented Aug. 11, 1891.



Witnesses.  
Robert G. Scott,  
J. A. Rutherford.

Inventor.  
William H. Pickett.  
By James L. Norrig.  
Atty.

(No Model.)

W. H. PICKETT.  
EXTENSION TABLE.

4 Sheets—Sheet 3.

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Fig. 5.

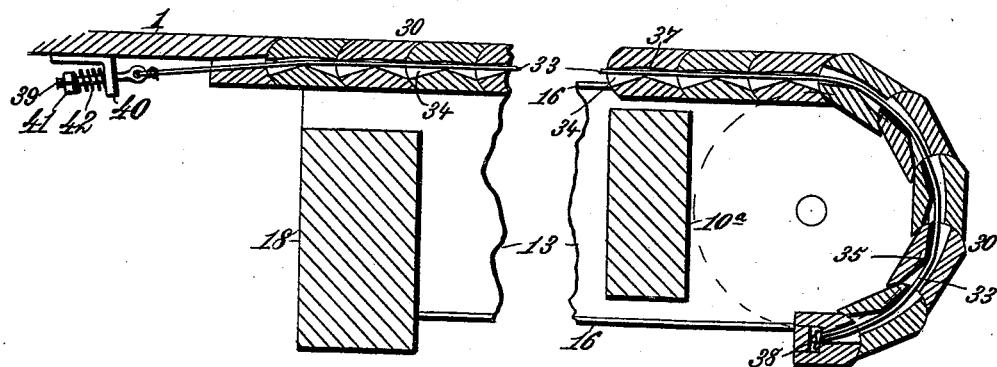
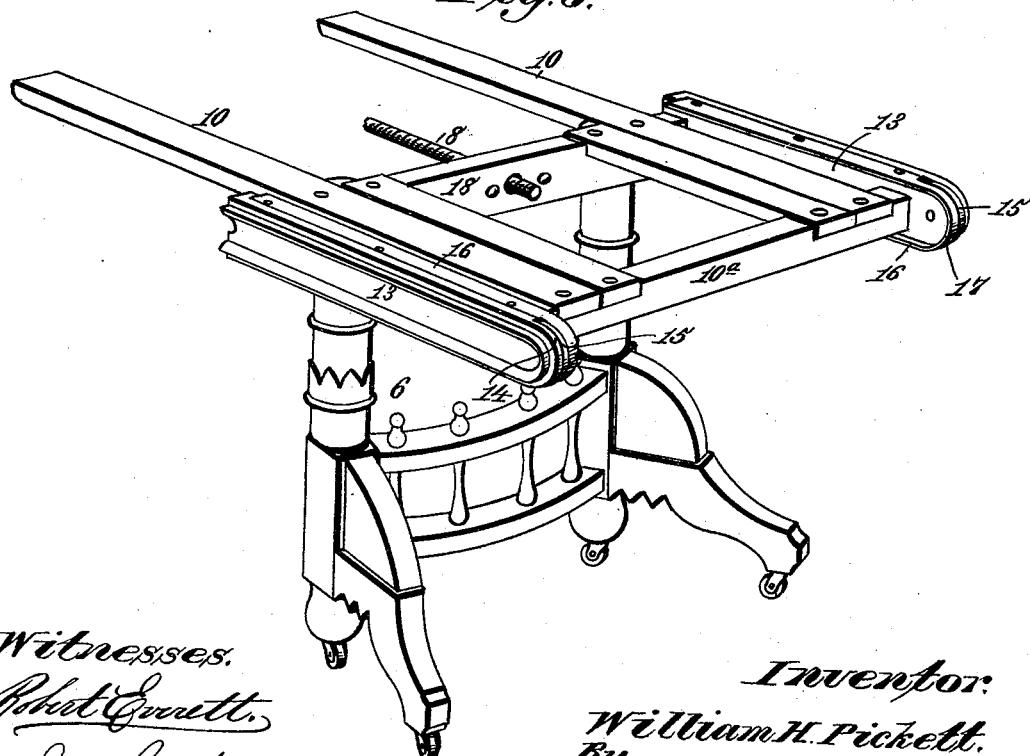


Fig. 6.



Witnesses:

*Robert Garrett.*  
*J.A. Rutherford.*

Inventor:

*William H. Pickett.*  
*By James L. Morris.*  
*Attest.*

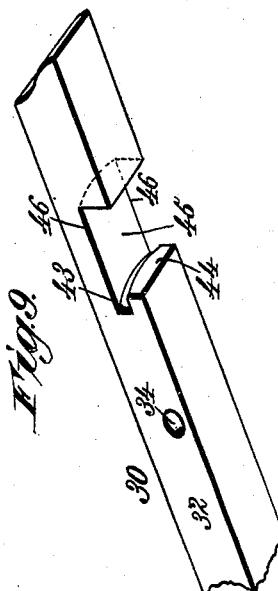
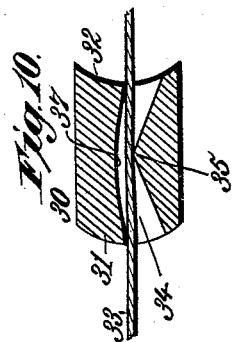
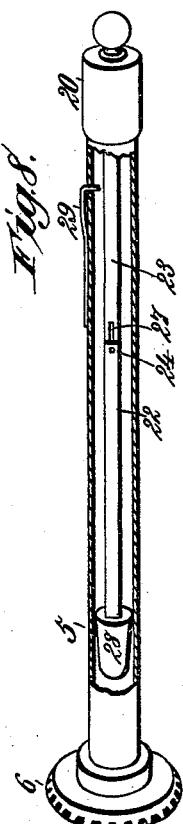
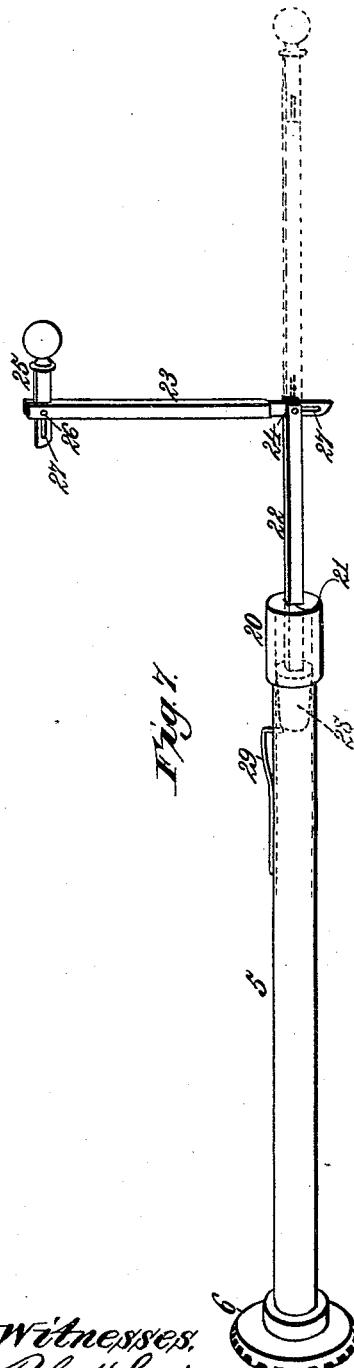
(No Model.)

4 Sheets—Sheet 4.

W. H. PICKETT.  
EXTENSION TABLE.

No. 457,429.

Patented Aug. 11, 1891.



Witnesses,  
Robert Elliott,  
J. A. Rutherford.

*Inventor.*  
William H. Pickett.  
*By*  
James L. Noritz.  
*Atty.*

# UNITED STATES PATENT OFFICE.

WILLIAM H. PICKETT, OF WARREN, PENNSYLVANIA.

## EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 457,429, dated August 11, 1891.

Application filed March 3, 1891. Serial No. 383,546. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. PICKETT, a citizen of the United States, residing at Warren, in the county of Warren and State 5 of Pennsylvania, have invented new and useful Improvements in Extension-Tables, of which the following is a specification.

This invention relates to that type of extension-tables having at the ends flexible table-top sections which are extended and retracted by simultaneously adjusting the end leg-frames of the table, as described and shown in my application for Letters Patent, Serial No. 357,577, filed June 17, 1890.

The objects of my present invention are to improve the prior construction; to provide novel means for simultaneously extending and retracting the flexible table-top sections; to provide an improved construction of slats 15 for the flexible table-top sections, whereby they are accurately articulated together and the flexible table-top section is rendered susceptible of uniform and proper movement round the adjustable leg-frames of the table, 20 and, finally, to render the extension-table more useful, desirable, efficient, and satisfactory in use. To accomplish all these objects, my invention involves the features of construction, the combination or arrangement 25 of parts, and the principles of operation hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view of an extension-table constructed in accordance with my invention, showing the flexible table-top sections extended. Fig. 2 is a longitudinal central sectional view taken on the line  $xx$ , Fig. 3. Fig. 3 is a bottom plan view of the same. Fig. 4 is a transverse sectional view taken on the line  $yy$ , Fig. 3. Fig. 5 is a detail longitudinal sectional view of one of the flexible table-top sections. Fig. 6 is a detail perspective view of one of the adjustable end leg-frames. Fig. 7 is a detail perspective view of the counter-shaft, showing its operating-crank extended for the purpose of turning the shaft to extend or retract the table. Fig. 8 is a perspective view, partly in section, showing the 40 crank housed or concealed in the counter-shaft. Fig. 9 is a detail perspective view of one of the slats comprising the flexible table-

top sections, and Fig. 10 is a detail transverse sectional view of one of the slats and a portion of one of the cables.

55

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates a stationary center panel or leaf having on its under side parallel rigidly-attached bars 2, to which is secured the center leg-frame 3. The under side of the center panel or leaf is provided with a pair of brackets 4, which constitute bearings 65 for a transversely-arranged counter-shaft 5, having its inner end, near the center of the table, provided with a bevel gear-wheel 6, which engages a similar gear-wheel 7, rigidly attached to a right-and-left-hand screw-threaded shaft 8. The bevel gear-wheel 7 is attached to the screw-shaft at a point between the right and left hand screw-threads, and on the central panel, in juxtaposition to the hub of the gear-wheel 7, are arranged a pair of 70 brackets 8<sup>a</sup>, which constitute bearings for the screw-shaft in its rotary movement and also hold the screw-shaft against longitudinal movement. At each end of the center panel is arranged an adjustable leg-frame 9, of the construction exhibited by Fig. 6 and comprising parallel slat-supporting bars 10, that move in and are guided by bracket arms or guides 12, secured to the under side of the center panel in such manner that the adjustable leg-frames 75 can move rectilinearly toward and from each other. The slat-supporting bars 10 are secured to the outermost cross-rail 10<sup>a</sup> of each adjustable leg-frame and extend past the inner cross-rail 18 of the leg-frame, so as to project beneath the stationary center panel or leaf 1 of the table.

The adjustable leg-frames are each provided with oppositely-placed side bars 13, having semicircular outer ends 14, containing rotary disks or wheels 15. The edge of each side bar is provided with a metallic plate which projects inwardly to constitute a metallic guide-flange 16. The metallic plates follow the outline of the side bars 13, 95 and thereby constitute the metallic guide-flanges 16, each of which comprises an upper and a lower portion arranged parallel with each other and connected at the outer end 100

portion by a semicircular switch portion 17 of the metallic plate, as will be understood by reference to Fig. 6. The top surfaces of the side bars are placed in the same horizontal 5 plane and serve as supporting-rails for the end portions of slats which constitute the flexible table-top sections hereinafter described.

The adjustable leg-frames are each made in such manner that it is practically a rigid 10 structure, and to the center portion of each inner cross-rail 18 is secured a nut 19, with which engages one portion of the right and left hand screw-threaded shaft 8. The screw-nuts 19 may be applied and secured in any 15 manner suitable for the conditions required; but preferably I attach them to the insides of the cross-rails 18 through the medium of bolts and nuts; but I do not confine myself to this method of attachment.

20 The counter-shaft 5 is adapted to be rotated through the medium of a suitable handle at one side of the table, so that by turning the counter-shaft a rotary movement is transmitted to the screw-threaded shaft, and 25 therefore the adjustable end leg-frames of the table will be simultaneously adjusted to or from each other, according to the direction in which the counter-shaft is rotated. The counter-shaft, as here shown, is tubular 30 or hollow, and at its outer end is provided with an attached socket 20, provided with a central, square, or other angular-shaped orifice 21 to receive the angular sections of a jointed crank adapted to be moved into 35 and out of the tubular counter-shaft. The crank, as here shown, is composed of two sections 22 and 23, jointed together at their contiguous ends, as at 24, while the outer end of the section 23 is provided with a crank- 40 handle 25, also jointed to such crank-section, as at 26, the construction being such that by moving the sections 22 and 23 and the crank- 45 handle 25 into alignment the crank as a whole can be moved lengthwise into and out of the tubular counter-shaft. When the crank is 50 moved to its outermost position, the jointed section 23 can be turned at right angles to the section 22 and the crank-handle 25 can be turned at right angles to the crank-section 55 23, as represented by full lines, Fig. 7. In this position the crank can be manipulated for the purpose of axially rotating the tubular counter-shaft, and thereby transmitting rotary motion to the screw-threaded shaft for the purpose of simultaneously adjusting the end leg-frames to or from each other.

The crank-section 23 and the crank-handle 25 are each provided with a slot, as at 27, in such manner that after the crank-sections 60 have been extended the section 23 can be turned at right angles to the section 22 and then moved lengthwise on the pivot-pin 24, through the medium of its slot 27, for the purpose of holding the crank-section 23 practically rigid for its proper action in turning the counter-shaft 5. The crank-handle 25 can also be moved lengthwise on the pivot-pin 26,

through the medium of its slot 27, for holding the crank-handle in proper position to secure the proper action of the parts comprising the crank. I do not confine myself to the particular construction shown, by which the crank-sections are made rigid, as it were, for the correct operation of the crank when extended to turn the counter-shaft, as obviously other devices or constructions could be provided without departing from the spirit of my invention.

When the end legs of the table have been adjusted to the position desired, the crank-sections 22 and 23 and the handle 25 are manipulated to place them in alignment, as indicated by dotted lines in Fig. 7, when the crank-sections can be moved lengthwise into the tubular portion of the counter-shaft, so that the ornamental head only of the crank-handle 25 will be exposed at one side of the table, as represented in Fig. 1. To prevent the complete withdrawal of the crank-section 22 from the counter-shaft I provide the inner 90 end of such section with an enlarged head 28 to form a shoulder which will strike the inner end portion of the socket 20 when the crank-sections are moved outward.

The counter-shaft may be provided with a 95 spring-catch 29, projecting thereinto and adapted to spring slightly behind or upon the enlarged head 28 when the crank-sections are moved outwardly for the purpose of preventing accidental inward movement of 100 such crank-sections, while permitting them to be moved inward under slight pressure exerted on the crank-sections in the direction of their length. If the spring-catch 29 be employed, I prefer to form the enlarged head 105 28 tapering, as illustrated, so that the inward pressure of the crank-sections will cause the enlarged head to press the spring-catch outwardly.

The right and left hand screw-threaded 110 shaft engaging stationary nuts on the movable end leg-frames is a very desirable and important feature, in that it enables both leg-frames to be simultaneously and uniformly adjusted toward or from each other 115 through the medium of a single counter-shaft 5, in consequence of which the flexible table-top sections are extended and retracted in unison. The screw-threaded shaft is also important in this character of extension-table, in that it rigidly holds both table-leg sections from any movement whatever relatively to each other unless the screw-shaft be rotated. By this means the adjustable 120 parts of the table are rigidly locked in their adjusted position without the employment of extraneous locking devices.

The flexible table-top sections are each composed of a series of transverse slats 30, each of which has one longitudinal edge 130 made convex, as at 31, and the opposite longitudinal edge made concave, as at 32, whereby the sections when placed together and connected by flexible cables or cords 33,

passed through all the series, will be articulated together, after the manner of knuckle-joints, so that one slat positively engages another and can turn thereupon as a center 5 or pivot. By this construction the continuity of the surface provided by the series of connected slats remains practically unbroken without regard to the movement of the flexible sections as a whole round the curved 10 outer ends of the side rails 13. The orifice 34 of each slat through which the cable passes is tapered in reverse directions, whereby the least diameter of the orifice is a single 15 central bearing-point 35, which constitutes, as it were, a knife-edge.

I have so constructed the orifices in the slats that the edges 36 of each slat will closely hug and rest upon the cable 33 during all movements of the flexible table-top 20 sections. This construction provides a triple bearing on the cable, by which the slat is prevented from rocking and oscillating on the cable, while at the same time the slat can properly move round the curved ends 25 of the side rails 13, in which movement the joints of the slats will assume the position indicated in Fig. 5; but the edges of the orifices in the slats will not be exposed on the outside, owing to the peculiar form of the 30 orifices to produce the edge bearings 36. To properly secure these independent edge bearings, the top surface or wall of each orifice is slightly concaved, as at 37, Fig. 10. The cables 33 are fastened to the outermost 35 slat, as at 38, and the inner end of each cable is connected with a device by which the tension of the cable is increased or its length adjusted for the purpose of tightening the several slats one upon the other to cause them 40 to more closely and accurately fit each other, while permitting the required movements of each slat in passing round the curved ends of the side rails.

The adjusting devices here shown are composed of screw-rods 39, passing through brackets 40, secured to the under side of the center panel 1, such screw-rods being provided with nuts 41 for adjusting the rods lengthwise and thereby causing them to draw and tighten 45 the cables. To provide a yielding connection between the cables and brackets and thereby permit the slats 30 to yield if they should stick, as it were, in their sliding movements, I provide a coiled or any other suitable spring 50 42 between each bracket 40 and the nut 41 on the cable which passes through such bracket. The springs surround the cables between the brackets and nuts, and by their resiliency they tend to draw the cables and thereby 55 serve the slats in contact with each other, while permitting the slats to yield. The slats are of such length that they extend beyond the outer edge of the side rails, and on their under sides are provided with under-cut 60 grooved portions 43 to form tongue portions 44, which engage and move upon the metallic flanges 16, attached to the edges of the

side rails 13. The metallic plates constituting the flanges 16 are attached to the edges of the side rails by screws or other suitable 70 means, whereby the inner edges of the plates project laterally past the inner side surfaces of the side rails, as will be clearly understood by reference to Fig. 4.

The metallic plates, arranged to form guide-flanges, as described, are more simple, useful, and desirable than guide-grooves cut into the side rails. The metallic plates are stronger, and being comparatively thin the flexibly-connected slats can slide easier than if the 75 tongue-pieces 44 engaged grooves in the side rails. It is very difficult to form grooves with the curved switch portion in the wooden side rails, owing to the liability of the wood to split at the ends where the curved switch portions are formed. This objection is entirely avoided by my present invention, and a superior construction having a more desirable and efficient mode of operation is obtained by providing the metallic plates to form the upper and lower guide-flanges, which are connected by the curved switch portions 17.

To reduce friction at the points where the slats 30 slide on the metallic plates, I concave the surface 45 of the groove 43, (see Fig. 9,) 85 so that the edges 46 constitute the bearings of the slats which rest upon the outer surfaces of the metallic plates. By this means the superficial contact between the slats and metallic plates is materially lessened and friction is thereby reduced.

An important feature of the invention resides in the provision of the pair of horizontal slat-supporting bars 10, located between the side rails 13 and connected with the outermost cross-rail 10<sup>a</sup> of each adjustable leg-frame. These slat-supporting bars 10 constitute, as it were, the backbone of the table, and also serve to sustain the slats between the side rails. They are important features 105 and avoid entirely the use of slides connected by tongues and grooves, and when the table is being lifted or a weight is put on the table when the latter is extended these supporting-bars fulfill all the conditions required to 110 strengthen the table and sustain the flexible table-top sections under any weight that may be placed thereon. To secure these results, the supporting-bars not only connect with the outermost cross-rail 10<sup>a</sup>, but they project a 115 considerable distance past the innermost cross-rail 18 and extend under the center panel 1. The length of the bars 10 is such that those of one leg-frame extend past those of the other leg-frame at all times, even though 120 the table is fully extended, and consequently these bars form continuous stiffeners for the table in its extended and retracted positions, whereby it is rendered strong and substantial 125 in use, and at the same time the bars fulfill the conditions required for supporting the flexibly-connected slats at points between the side rails 13. The sliding engagements of the slats with the metallic flanges prevent any 130

and all of the slats from being moved and raised vertically in a direction away from the outer edges of the side rails, so that the flexible table-top sections are retained in proper 5 working position, and thereby materially contribute to the attractive appearance of the table, by which it is rendered a very desirable and merchantable article for dining-room furniture.

10 In the construction of the slats 30 the convex and concave edges 31 and 32 are struck from the same center, so as to be concentric, and the curved portions extend the full thickness of the slats in such manner that the 15 slats can turn on each other like knuckles, and in their turning movements the superficial contact of the convex and concave edges is preserved, whereby the accumulation of crumbs and other matter is effectively prevented at the joints of the slats. The peculiar construction of the slats secures a continuous surface and avoids the presence of any gaps in the turning movements of the slats round the curved portions 20 of the leg-frames. This feature, in connection with the flexible cables on which the slats are strung, is important, in that it enables me to produce a perfect and practically working flexible section, which renders the 25 table superior in many respects to ordinary tables having flexible sections of this type.

Having thus described my invention, what I claim is—

1. The combination, in an extension-table, 35 of a stationary center panel, a pair of adjustable leg-frames, each comprising side rails and provided with parallel slat-supporting bars arranged between the side rails and projecting under the center panel, bracket arms 40 or guides on the underside of the center panel, with which the inner end portions of the slat-supporting bars engage, flexible table-top sections resting upon the side rails of the leg-frames and sustained between such side rails 45 by the parallel slat-supporting bars, and means for simultaneously adjusting the leg-frames to extend and retract the flexible table-top sections, substantially as described.

2. An extension-table having a stationary 50 panel, a flexible table-top section, and an adjustable leg-frame comprising inner and outer cross-rails, side rails engaged with the flexible table-top sections, and supporting-bars arranged between the side rails, connected 55 with the outermost cross-rail and extending past the innermost cross-rail along the under side of the stationary panel for the purpose of sustaining the flexible table-top section at points between the side rails of the leg-frame, 60 substantially as and for the purpose described.

3. The combination, in an extension-table, 65 of a panel or leaf, an adjustable leg-frame, a flexible table-top section composed of slats provided with transverse orifices which have a triple bearing, and cables extending through the orifices and resting against the said triple bearing, substantially as described.

4. The combination, in an extension-table, of a panel or leaf, an adjustable leg-frame, a flexible table-top section composed of slats 70 provided with transverse orifices, each containing a center knife-edge 35, opposite edge bearings 36, and a concavity 37 between such opposite edge bearings, and flexible cables connecting the slats and resting against the 75 said bearings, substantially as described.

5. The combination, in an extension-table, of a panel or leaf, an adjustable leg-frame having side frames provided with attached metallic plates projecting laterally from the 80 inner vertical surfaces of the side frames and comprising upper and lower parallel portions connected by the curved switch portion, and a flexible table-top section composed of slats 85 having transverse-grooved under surfaces forming tongue-pieces which engage with the metallic plates, substantially as and for the purpose described.

6. The combination, in an extension-table, of a stationary panel, an adjustable leg-frame, 90 a flexible table-top section connected with the panel and engaging the leg-frame, a screw-shaft for adjusting the leg-frame to extend and retract the flexible table top section, a transverse counter-shaft geared to the screw-shaft for rotating the latter, and a jointed 95 lengthwise-movable crank adapted to be drawn outwardly at one side of the table for the purpose of adjusting the leg-frame, substantially as described. 100

7. The combination, in an extension-table, of a stationary panel, an adjustable leg-frame, a flexible table-top section attached to the panel and engaging the leg-frame, a transverse tubular shaft journaled in bearings on 105 the panel, mechanism operated by the tubular shaft to adjust the leg-frame, and a crank movable lengthwise into and out of the tubular shaft and adapted to be withdrawn at one side of the table for the purpose of adjusting 110 the leg-frame to extend and retract the flexible table-top section, substantially as described. 110

8. The combination, in an extension-table, of a stationary panel, an adjustable leg-frame 115 having trackways, a flexible table-top section composed of transversely-perforated slats strung upon a flexible cable and having tongue-pieces engaging the trackways of the leg-frame, and an adjustable spring yielding connection between the inner end of the cable and the under side of the panel, substantially as described.

9. The combination, in an extension-table, 125 of a stationary panel, an adjustable leg-frame having trackways, a flexible table-top section attached to the center panel and composed of perforated slats strung upon a flexible cable and having tongue-pieces engaging the trackways of the leg-frame, a bracket secured to the under side of the stationary panel, and an adjustable spring yielding connection between the inner end of the cable and the bracket, substantially as described. 130

10. The combination, in an extension-table, of a panel, an adjustable leg-frame having attached metallic plates to form guide-flanges, and flexibly-connected slats having grooves, 5 each provided with concaved surfaces 45 to form opposite edge bearings 46, which rest upon the metallic plates for reducing friction, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of 10 two subscribing witnesses.

WILLIAM H. PICKETT. [L. S.]

Witnesses:

ALBERT H. NORRIS,  
JAMES A. RUTHERFORD,