

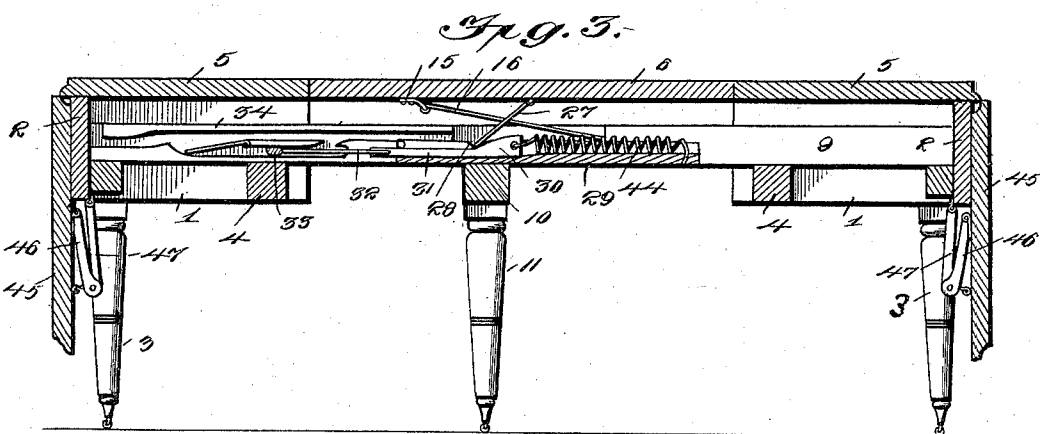
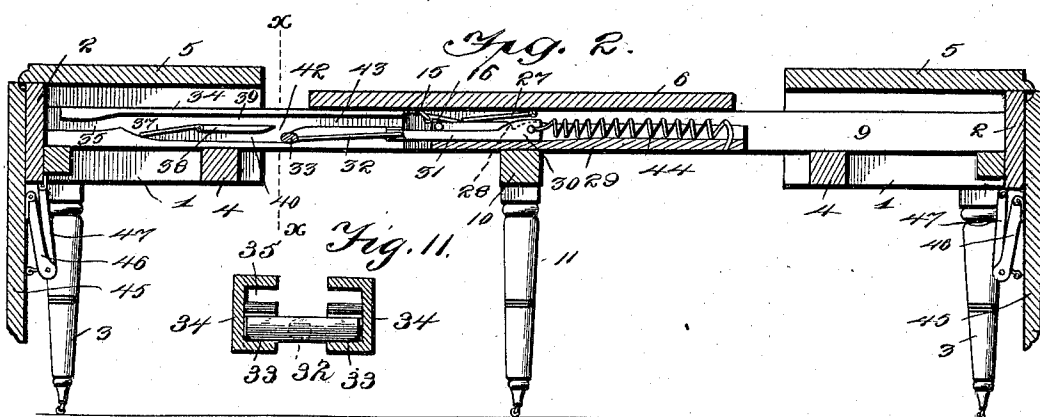
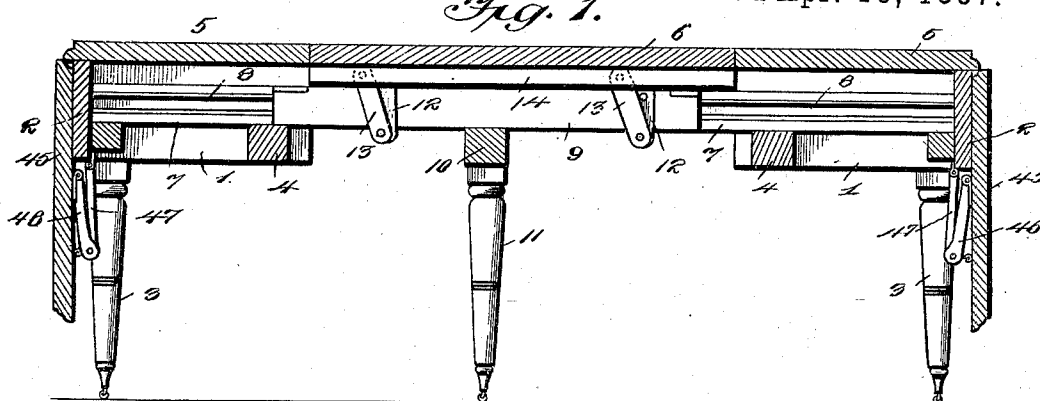
(No Model.)

2 Sheets—Sheet 1.

C. L. BRADFORD.
EXTENSION TABLE.

No. 580,543.

Patented Apr. 13, 1897.



Inventor
Charles L. Bradford,

Witnesses

H. Koerth.
P. M. Smith.

By his Attorneys,

C. A. Snow & Co.

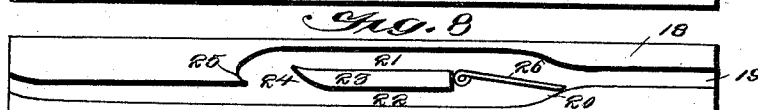
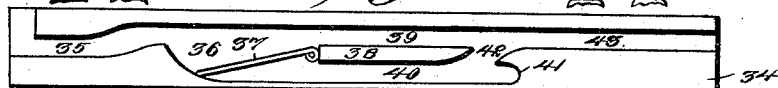
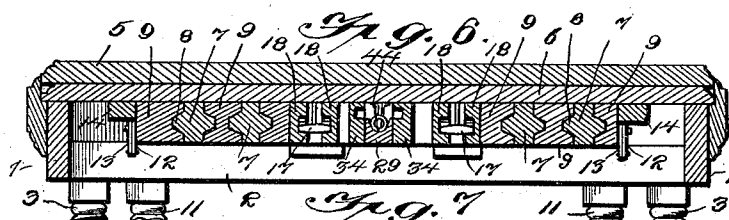
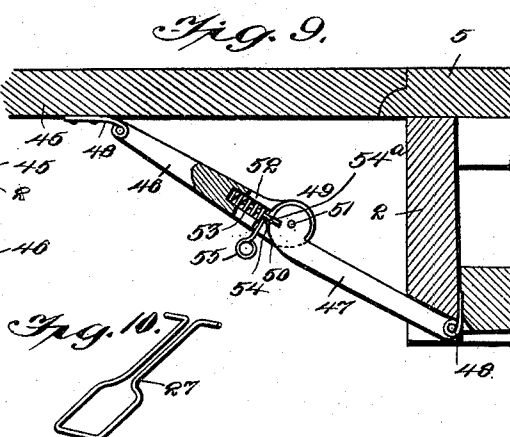
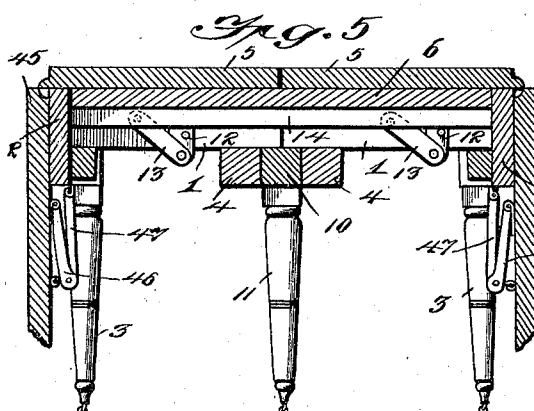
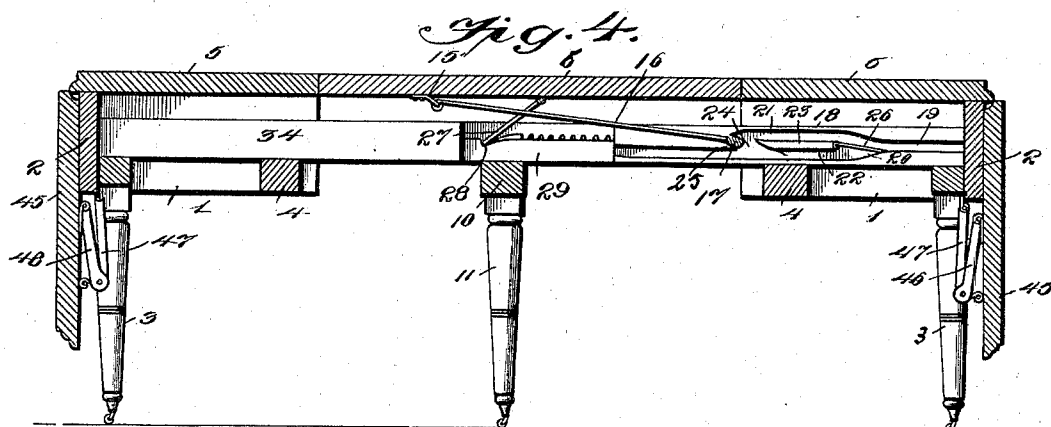
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2 Sheets—Sheet 2.

C. L. BRADFORD.
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UNITED STATES PATENT OFFICE.

CHARLES L. BRADFORD, OF SCANDIA, PENNSYLVANIA.

EXTENSION-TABLE.

SPECIFICATION forming part of Letters Patent No. 580,543, dated April 13, 1897.

Application filed October 8, 1896. Serial No. 608,299. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. BRADFORD, a citizen of the United States, residing at Scandia, in the county of Warren and State of Pennsylvania, have invented a new and useful Extension-Table, of which the following is a specification.

This invention relates to extension-tables; and the object in view is to provide a simple, convenient, and practical extension-table in which the extension leaf or leaves are connected to the frame of the table in such manner that with the aid of suitable mechanism, when the table is drawn out or extended, said leaf or leaves will be automatically moved into the plane of the top of the table and locked in position for use. The mechanism for moving the leaf or leaves is of such character that it also operates upon the extension leaf or leaves so as to drop the same below the plane of the top of the table when the table is again extended slightly, the end portions of the top being thereafter adapted to move together and inward over the extension leaf or leaves until they meet at a central point. By the improved arrangement the necessity of carrying extra leaves to and from the table is obviated and the operation of extending the table greatly facilitated.

The invention consists in an improved extension-table embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a longitudinal section through the improved table, showing the same extended, with the end hinged leaves folded down. Fig. 2 is a similar view showing the mechanism for dropping the extension-leaf, said leaf being lowered in readiness to have the end portions of the table-top closed over it. Fig. 3 is a similar section showing the position of such mechanism when the table is extended. Fig. 4 is a similar section showing the mechanism for elevating the extension-leaf. Fig. 5 is also a longitudinal section showing the table folded. Fig. 6 is a cross-section through the upper portion of the table. Fig. 7 is an enlarged detail elevation of one of the grooved bars which acts as a guide for the lowering mechanism of the

extension-leaf. Fig. 8 is a similar view of one of the grooved bars controlling the lifting mechanism for the extension-leaf. Fig. 9 is an enlarged detail section through one end of the table and hinged leaf, showing the jointed brace for supporting said leaf. Fig. 10 is a detail perspective view of the latch for upholding the extension-leaf. Fig. 11 is a sectional detail on the line *xx* of Fig. 2.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

In the drawings, 1 designates the side rails of the table-frame, and 2 the end rails, rigidly connecting the side rails. Suitable supporting-legs 3 are arranged at the corners of the table, being located at the junction of the side and end rails, and the side rails are divided centrally to provide for moving the end portions of the table apart, the inner ends of the side-rail sections being connected in pairs by cross-pieces 4.

5 designates the end portions of the table-top or the stationary leaves, which are rigidly secured upon the end frames just described and which are located a sufficient distance above the top edges of the side rails 1 to admit of the extension leaf or leaves 6 sliding thereunder. Secured to the end rails 2 and extending over and secured to the cross-pieces 4 are slides 7, which extend longitudinally of the table and are provided on opposite sides with longitudinal beads 8. The slides 7 move between spaced guides 9, and these guides are provided in their inner adjacent faces with longitudinal grooves for the reception and guidance of the beads 8, thus imparting vertical stiffness to the table. The guides 9 are secured rigidly to the upper side of a central transverse rail 10, (see Fig. 1,) supported at its ends upon legs 11.

To the outer surfaces of the outside guides 9 are rigidly attached metal ears 12, and pivotally connected to said ears are links 13, the upper ends of which connect pivotally at spaced points with cleats 14, secured to the under side of the extension-leaf 6, which is arranged over and above the plane of the several slides and guides and adapted to move up and down, being guided in its movements by the links 13, which are all correspondingly inclined.

Connected to the under side of the extension-leaf 6 by means of clips or eyes 15 are draft-rods 16, provided at their free or outer ends with cross-heads 17, (see Fig. 6,) forming oppositely-projecting trunnions, which work in grooves in the inner adjacent faces of spaced bars 18. There are two pairs of these spaced bars 18, and they are secured to the rail 2 and cross-bar 4 of one of the movable end portions of the table between the inner guides 9, with a space between them, as shown in Figs. 4 and 6. Each of said bars is provided with a longitudinal groove 19, extending from its outer end inward, said groove being expanded at the point 20 and extended to form an upper branch or portion 21 and a lower branch or portion 22, the upper and lower portions being separated by an interposed web 23 and again merging into each other through the passage 24. The upper portion 21 of the groove terminates at its inner end in a recessed shoulder 25, with which the cross-head or one of the trunnions engages. In the expanded portion 20 of the groove is pivotally mounted a switch 26, fulcrumed at the outer end of the web 23 and resting at its free end in the base of the groove at the point where the same begins to widen. When the table is folded or closed, the cross-heads or trunnions 17 rest in the outer ends 19 of the grooves. When the end portions of the table are drawn apart, the bars 18 move with the end portion to which they are attached and slide on the cross-heads or trunnions 17 until the latter are engaged by the shoulders 25 on the bars 18, when the rods 16 will also move with the end portion and thereby draw upon the extension-leaf 6, and the latter, owing to its pivotal connection to the guides 9 by the links 13, will thereupon swing upward into the plane of the table-top, as shown in Fig. 4. The extension-leaf is maintained in this position by means of a latch 27, which is pivoted to the under side of the extension-leaf. This latch is bail-shaped and has a transversely extended or widened free end, which enters a notch 28 in a latch-bar 29, secured rigidly to the upper side of the transverse rail 10. The bar 29 is provided with a central longitudinal recess, in which is mounted to slide a wedge 30, which operates to lift the free end of the latch out of engagement with the notch 28, and said wedge has a longitudinal shank 31, to the outer end of which is pivotally connected a rod 32, having at its outer ends cross-heads or oppositely-projecting trunnions 33, which work in grooves in the inner adjacent surfaces of spaced bars 34, secured to the opposite end of the table from the similar bars 18, above described. The bars 34 are provided at their outer ends with the groove 35, which at a suitable point is expanded to form the widened portion 36, in which is arranged a pivoted switch 37, similar to that 26, above described, and fulcrumed at the outer end of a dividing-web 38, which separates the groove into an upper portion 39 and a lower portion

40, the latter portion terminating in a recessed shoulder 41 and merging into the upper portion of the groove near said shoulder by means of the oblique passage 42, the groove being then extended longitudinally, as indicated at 43.

When it is desired to fold or close the table, the end portions thereof are drawn apart slightly, whereupon the cross-heads or trunnions 33 will come in contact with the shoulders 41, and this will move the wedges 30, so as to disengage the latch 27. By now pushing the ends of the table toward each other the cross-head 33 will travel through the portions 40 of the grooves and will lift and pass beyond the switches 37. At the beginning of this movement the free end of the latch 27 will ride upon the upper surface of the latch-bar 29 and allow the extension-leaf to drop, thus enabling the stationary leaves 5 to slide over the extension-leaf 6.

44 is a spiral spring which is mounted in a recess in the latch-bar 29 and connected to the wedge 30, so as to draw the same back and leave the notch 28 open to receive the latch 27. When the table is drawn out, the cross-head 33 rides over the switches 37 and the web 38, and after the end portions of the table are pushed toward each other and against the edges of the extension-leaf said cross-head drops through the oblique passage 42 into the lower portion 40 of the grooves, where it is in readiness to again be moved into engagement with the shoulder 41 for dropping the extension-leaf. After the extension-leaf has been raised by the cross-head 17 coming in contact with the shoulder 25, just as the end portions of the table are moved inward against the edges of the extension-leaf, said cross-head drops through the passage 24 into the lower portion 22 of the groove, and when the table is folded or closed subsequently said cross-head passes along the lower portion of the groove and lifts and passes the switch 26, which drops by gravity into its normal position (shown in Fig. 8) after the cross-head has passed it.

The table is provided at each end with a hinged leaf 45, and this leaf is supported horizontally by a jointed brace consisting of two sections 46 and 47. Each of these sections is pivotally connected at its opposite ends to suitable eyes 48 on the hinged leaf and end rail 2 of the table, respectively, and they are connected at their adjacent ends by a knuckle-joint 49, comprising shoulders 50, which will limit the vibration of the sections in one direction, but which will enable the connecting-pivot 51 to pass above a line drawn through the pivotal connections of the outer ends of said sections with the hinged leaf and table in order that said sections may form a lock for rendering the brace rigid and firmly upholding the hinged leaf 45. One of the sections 46 is provided with a longitudinal recess 52, in which is arranged a spiral spring 53. This spring actuates a catch 54 and

forces the same into engagement with the notch 54^a in the section 47 of the brace for maintaining the brace-sections in locked relation. The catch 54 is provided with a finger-piece 55, by means of which it may be disengaged from the notch 54^a when it is desired to break the joint in the brace and fold the hinged leaf downward.

From the foregoing description it will be seen that the extension-table may be readily extended and folded and that the extension-leaf will be automatically raised and lowered into and out of position simply by moving the end portions of the table apart or together; also that provision is made for firmly supporting the hinged end leaves in their horizontal position.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. In an extension-table, the relatively-movable end leaves rigidly attached to the end portions of the table, in combination with an extension-leaf pivotally connected to the table-frame by links and adapted to move up and down between the end leaves and to slide under the same, a draft-rod connected at one end to the extension-leaf and having its opposite end slidingly engaged with a grooved bar mounted on one of the movable ends of the table, said end cooperating with a stop on said bar for swinging the extension-leaf upward, and a latch for maintaining said extension-leaf in its raised position, substantially as described.

2. In an extension-table, the combination with the movable end portions thereof carrying the stationary leaves, of an extension-leaf pivotally mounted on swinging links and adapted to move up and down into and below the plane of the table-top, a draft-bar having one end connected to said extension-leaf and provided at its other end with a cross-head, and spaced bars provided in their adjacent surfaces with grooves for guiding said cross-head and terminating in shoulders for engaging said cross-head and with switches which cooperate with said cross-head, substantially as and for the purpose described.

3. In an extension-table, the combination with the movable end portions thereof carrying the stationary leaves, of an extension-leaf mounted on pivotal links and adapted to move up and down into or below the plane of the table-top, mechanism for elevating said leaf as the table is drawn out, a latch for upholding said leaf, and lowering mechanism consisting of a reciprocating wedge for disengag-

ing said latch, a rod connected to said wedge and having a cross-head at one end, and a grooved bar for guiding said cross-head, said bar being provided with a shoulder for engaging said cross-head, whereby the wedge is operated for disengaging the latch, substantially as described.

4. In an extension-table, the combination with the movable end portions thereof and the stationary leaves thereon, of an extension-leaf mounted on pivotal links and adapted to move up and down into and below the plane of the table-top, means interposed between said extension-leaf and one end of the table for raising said extension-leaf, a latch for upholding said leaf when raised, and means connected with the other end of the table for disengaging said latch when the end portions of the table are moved apart, substantially as described.

5. In an extension-table, the combination with the movable end portions thereof and the stationary leaves thereon, of the extension-leaf pivotally supported on the table-frame, connections between the extension-leaf and one of the end portions of the table to automatically raise the former into the plane of the end portions when the latter are drawn apart, a device connected to the extension-leaf and adapted to engage a fixed stop on the frame to hold the said leaf in its raised position, and means connected to the other end portion of the table to cause the disengagement of the supporting device with said stop when the end portions are drawn apart, substantially as described.

6. In an extension-table, the combination with the movable end portions thereof and the stationary leaves thereon, of the extension-leaf movably supported on the table-frame, connections between the extension-leaf and one of the end portions of the table to raise said extension-leaf into the plane of the end portions, a latch pivoted to the under side of the extension-leaf and its free end adapted to engage a fixed stop on the frame to hold the said leaf in its raised position, a sliding wedge adapted to engage the free end of the latch and lift it out of engagement with the fixed stop, and suitable connections between the sliding wedge and the other end portion of the table, whereby the wedge is operated when the end portions of the table are drawn apart, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES L. BRADFORD.

Witnesses:

E. G. AKELEY,
WM. MCCRAY.